KV-E2533E/E2933E/E3433E
KV-E2532U/E2932U

RM-830 RM-830 RM-832

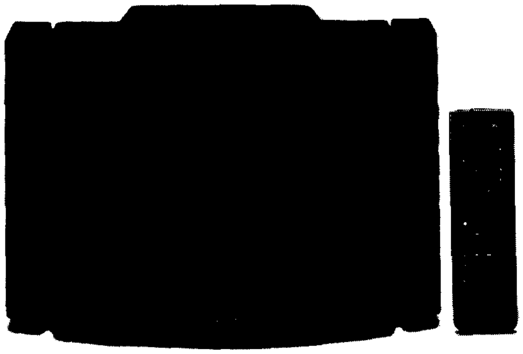
SERVICE MANUAL

Spanish Model

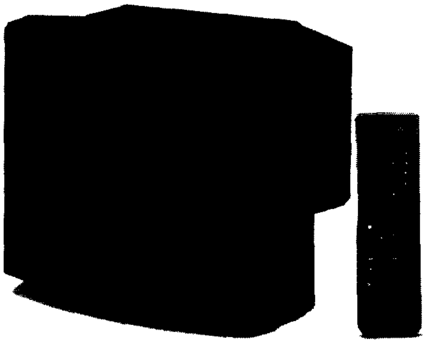
KV-E2533E
Chassis No. SCC-F33A-A
KV-E2933E
Chassis No. SCC-F33B-A
KV-E3433E
Chassis No. SCC-F33C-A

UK Model

KV-E2532U
Chassis No. SCC-F25A-A
KV-E2932U
Chassis No. SCC-F25B-A



(Photo : KV-E2533E/ E2933E, KV-E2532U/ E2932U) RM-830



(Photo : KV-E3433E) RM-832

AE-2 CHASSIS

MODELS OF THE SAME SERIES	
KV-E2533E/E2933E/E3433E	
KV-E2532U/E2932U	

SPECIFICATIONS

【KV-E2533E/E2933E/E3433E】

Television system	B/G/H, D/K
Stereo system	GERMAN/NICAM stereo
Channel coverage	PAL B/G/H VHF: E2-E12 UHF: E21-E69 CABLE TV (1) : S1-S41 CABLE TV (2) : S01-S05, M1-M10, U1-U10 ITALIA VHF: A-H12 (C) UHF: 21-69 D/K VHF : R01-R12 UHF : R21-R60

【KV-E2532U/E2932U】

Television system	I
Stereo system	NICAM stereo
Channel coverage	UHF : B21-B69

Colour system	PAL, SECAM, NTSC3.58, NTSC4.43
Picture tube	Hi-Black Trinitron tube Approx. 63 cm (25 inches) (Approx. 59 cm picture measured diagonally) 110 ° -degree deflection Approx. 72 cm (29 inches) (Approx. 68 cm picture measured diagonally) 110 ° -degree deflection Approx. 86.0 cm (34 inches) (Approx. 80.0 cm picture measured diagonally) 110 ° -degree deflection

-Continued to next page-

TRINITRON® COLOUR TV

SONY®

MICROFILM

Inputs/Outputs Terminals

(REAR)

-⊛ 1 21-pin Euro connector
(CENELEC standard)
Inputs for audio and video signals
- inputs for RGB
- outputs of TV video and audio signals

⊖→ 2/-⊟ 2 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video
- outputs for audio and video signals (selectable)

⊖→ 4/-⊟ 4 21-pin Euro connector
- inputs for audio and video signals
- inputs for S video
- outputs for audio and video signals (monitor out)

-⊟ 2, -⊟ 4 S video inputs
- 4 pin DIN

-⊖ Audio inputs (L, R) -phono jacks
⊟→ S video output - 4 pin DIN
⊖→ Audio outputs - phono jacks
⊖→ Audio outputs (variable) - phono jacks
External speaker terminals : 2 pin
Woofer terminal : 2 pin

(FRONT)

-⊟ 3 Video input-phono jack
-⊖ Audio input-phono jacks
-⊟ 3 S video input 4-pin DIN
∩ Headphone jack : Stereo minijack

Sound output	2×11W RMS (side speakers), 35W music power (woofer) 2×30W (side speakers), 35W (woofer)
Power consumption	109Wh (KV-E2533E) 116.4Wh (KV-E2933E) 140Wh (KV-E3433E) 171W (KV-E2532U) 186W (KV-E2932U)
Dimensions incl.speakers	Approx.756 x 493 x 468 mm (w/h/d) (KV-E2533E/E2532U) Approx.837 x 553 x 513 mm (w/h/d) (KV-E2933E/E2932U) Appro. 822 x 659 x 587mm (w/h/d) (KV-E3433E)
Weight incl.speakers	Approx. 40 kg (KV-E2533E/E2532U) Approx. 53 kg (KV-E2933E/E2932U) Approx. 78 kg (KV-E3433E)
Supplied accessories	RM-830 Remote Commander (1) (KV-E2533E/E2933E/E2532U/E2932U) RM-832 Remote Commander (1) (KV-E3433E) IEC designation R6 batteries (2)
Other features	Digital comb filter (High resolution) PIP (Picture-in-picture) TOPTEXT

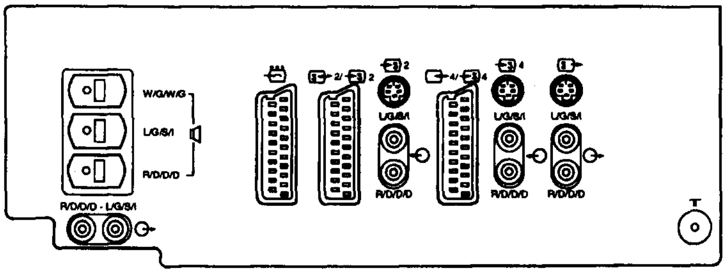
【RM-830/832】

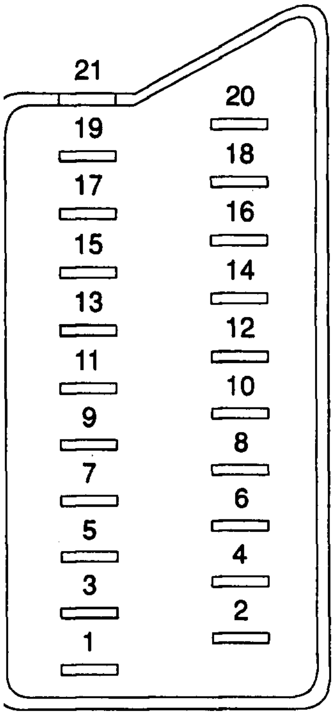
Remote control system	infrared control
Power requirements	3V dc 2 batteries IEC designation R6 (size AA)
Dimentions	Approx.65×222×21mm (w/h/d)
Weight	Approx.157g (Not including Batteries)

Design and specifications are subject to change without notice.

Model name / Item	KV-E2533E	KV-E2532U	KV-E2933E	KV-E2932U	KV-E3433E
Pal Comb	ON	ON	ON	ON	ON
PiP	ON	ON	ON	ON	ON
RGB Priority	ON	ON	ON	ON	ON
Woofer Box	ON	ON	ON	ON	ON
Scart 1	ON	ON	ON	ON	ON
Scart 2	ON	ON	ON	ON	ON
Front In (3)	ON	ON	ON	ON	ON
Scart 4	ON	ON	ON	ON	ON
Dyn.Convergence	OFF	OFF	OFF	OFF	ON
Projector	OFF	OFF	OFF	OFF	OFF
AxB in 16:9 mode	ON	ON	ON	ON	ON
Norm B/G	ON	OFF	ON	OFF	ON
Norm I	OFF	ON	OFF	ON	OFF
Norm D/K	ON	OFF	ON	OFF	ON
Norm AUS	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF
Norm N	OFF	OFF	OFF	OFF	OFF
Language Preset	Espanol	English	Espanol	English	Espanol

21 pin connector (-ö1, ⊖2/⊖4)



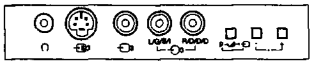


Pin No	1	2	4	Signal	Signal level
1	○	○	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance:less than 1kohm*
2	○	○	○	Audio input B (right)	Standard level:0.5Vrms Input impedance:More than 10kohms*
3	○	○	○	Audio output A (left)	Standard level:0.5Vrms Output impedance:less than 1kohm*
4	○	○	○	Ground (audio)	
5	○	○	○	Ground (blue)	
6	○	○	○	Audio input A (left)	Standard level:0.5Vrms Input impedance:More than 10kohms*
7	○	●	●	Blue input	0.7V±3dB, 75ohms, positive
8	○	○	○	Function select (AV control)	High state (9.5—12V):Part mode Low state (0—2V):TV mode Input impedance:More than 10kohms Input capacitance:Less than 2nF
9	○	○	○	Ground (green)	
10	○	○	○	Open	
11	○	●	●	Green	Green signal:0.7V±3dB. 75ohms, positive
12	○	○	○	Open	
13	○	○	○	Ground(red)	
14	○	○	○	Ground (blanking)	
15	○	—	—	Red input	0.7V±3dB, 75ohms, positive
	—	○	○	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	●	●	Blanking input (Ys signal)	High state (1—3V) Low state (0—0.4V) Input impedance:75ohms
17	○	○	○	Ground (video output)	
18	○	○	○	Ground (video input)	
19	○	○	○	Video output	1V±3dB, 75ohms, positive Sync:0.3V(−3, +10dB)
20	○	—	—	Video input	1V±3dB, 75ohms, positive Sync:0.3V(−3, +10dB)
	—	○	○	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync:0.3V(−3, +10dB)
21	○	○	○	Common ground (plug, shield)	

○ connected ● unconnected (open) * At 20 Hz—20kHz

4 pin connector (-⊞)

Pin No	Signal	Signal level
1	Ground	
2	Ground	
3	Y (S signal) input	1V±3dB 75ohm, positive Sync 0.3V$^{-3}_{+10}$dB
4	C (S signal) input	0,3V±3dB 75ohm, positive



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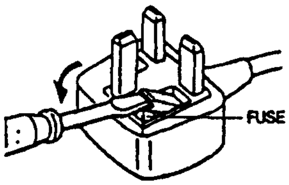
UK Model

The flexible mains lead is supplied connected to a BS1363 fused plug having a fuse of 5 amp capacity. Should the fuse need to be replaced, use a 5 AMP FUSE approved by ASTA to BS1362, ie carried the ◈ mark.
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME, IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED. THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.
When an alternative type of plug is used it should be fitted with a 5 AMP FUSE, otherwise the circuit should be protected by a 5 AMP FUSE at the distribution board.



(CAUTION)

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

WARNING!!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.
THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

SAFETY-RELATED COMPONENT WARNING !!

COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

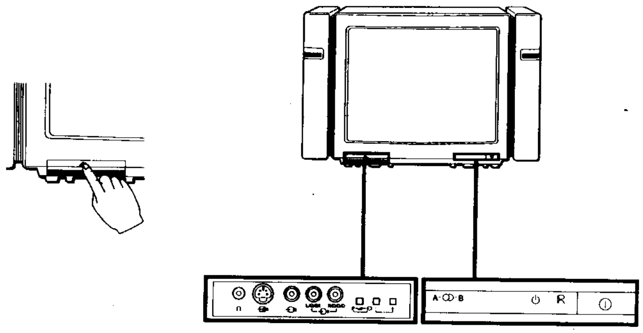
1-1. OVERVIEW

SECTION 1
GENERAL

This section is extracted from instruction manual.

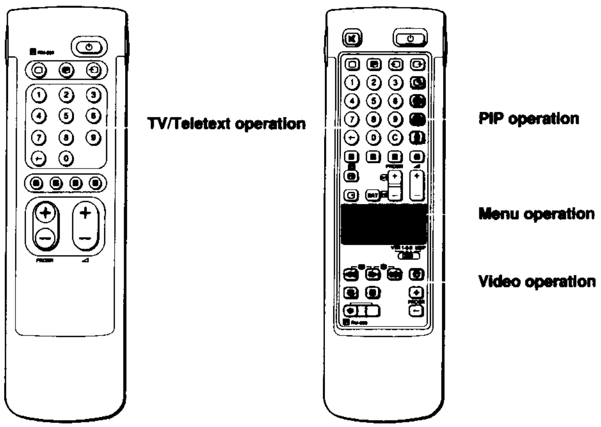
This section briefly describes the buttons and controls on the TV set and on the Remote Commander. For more information, refer to the pages given next to each description.

TV set - front



Symbol	Name	Refer to page
⏼	Main power switch	42
⏻	Standby indicator	42
A-ꝏ-B	Stereo A/B indicators	44
∩	Headphones jack	50
→Ⓢ 3, →⊃ 3, →⊙ 3,	Input jacks (S-video/video/audio)	50
P→⊿→⊃	Function selector (Programme/volume/input)	43
–/+	Adjustment buttons for function selector	43

Remote Commander



Note
The SAT button does not operate with this TV.

Simple side

Full-Function side

TV-operation

Symbol	Name	Refer to Page
🔇	Mute on/off button	43
⏻	Standby button	42
▢	TV power on/TV mode selector button	42
⊜	Teletext button	43
→⊃	Input mode selector	43
⊂→	Output mode selector	51
1,2,3,4,5,6, 7,8,9, and 0	Number buttons	42
–/– –	Double-digit entering button	42
C	Direct channel entering button	41
■–	Volume control button	42
PROGR +/–	Programme selectors	42
⊡⊡	Teletext page access buttons	47
●	Picture adjustment button	44
♪	Sound adjustment button	44
⊕	On-screen display button	43
⊞	Teletext hold button	47
◎	Time display button	43
■■■■	Fastext buttons	47

PIP (Picture-in-picture) operation

Symbol	Name	Refer to Page
◔	PIP on / off button	46
↑	PIP source selector	46
◕	Swap button	46
⊕	PIP position changing button	46

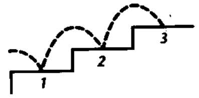
Menu operation

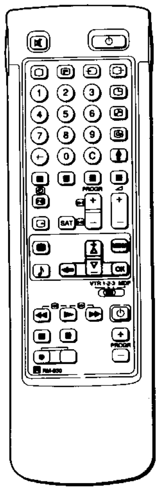
Symbol	Name	Refer to Page
MENU	Menu on / off button	36
↘+/↖–	Select buttons	36
OK	OK (confirming) button	36
⬅	Back button	36

Video operation

Symbol	Name	Refer to Page
VTR1/2/3 MDP	Video equipment selector	52
◀◀ ▶ ▶▶ ■ ❚❚ ● ⏻ PROGR +/–	Video equipment operation buttons	52

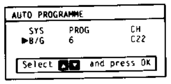
1-2. TUNING IN TO TV STATIONS





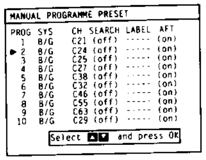
Once you have set up the TV, you can choose the language of the menu. Then you should preset the channels (up to 100 channels) by choosing either the automatic or manual method.

The automatic method is easier if you want to preset all receivable channels at once. Use the manual method if you only have a few channels and want to preset channels one by one. The manual method is also convenient for allocating programme numbers to various video input sources.



```
AUTO PROGRAMME
  SYS       PROG        CH
 ▶B/G       6           C22

 Select ▲▼ and press OK
```

Auto Menu

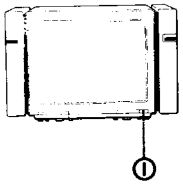


```
MANUAL PROGRAMME PRESET
PROG  SYS   CH  SEARCH LABEL  AFT
   1  B/G   C21 (off)  -----  (on)
 ▶ 2  B/G   C24 (off)  -----  (on)
   3  B/G   C25 (off)  -----  (on)
   4  B/G   C27 (off)  -----  (on)
   5  B/G   C38 (off)  -----  (on)
   6  B/G   C32 (off)  -----  (on)
   7  B/G   C46 (off)  -----  (on)
   8  B/G   C55 (off)  -----  (on)
   9  B/G   C63 (off)  -----  (on)
  10  B/G   C29 (off)  -----  (on)
          Select ▲▼ and press OK
```

Manual Menu

Before you begin

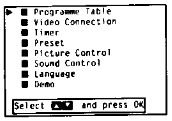
- Check that the Full-Function side of the Remote Commander is visible.
- Locate Menu operation buttons on the Remote Commander. They are shaded in the illustration at the left.



❶ Display the Menu

1 Depress ① on the TV.
The TV will switch on. If the standby indicator on the TV is lit, press ▢ or a number button on the Remote Commander.

2 Press the MENU button.
The main menu appears.



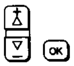
```
▶ ■ Programme Table
  ■ Video Connection
  ■ Timer
  ■ Preset
  ■ Picture Control
  ■ Sound Control
  ■ Language
  ■ Demo
 Select ▲▼ and press OK
```

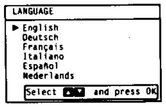
Fig. 1.

❷ Choose a language

1 Select `Language` with the Δ+ or ∇– button and press the OK button.
The `LANGUAGE` menu appears. (See Fig. 2)

2 Select the language you want with Δ+ or ∇– , press OK, and then press ⬅.
Now, choose one of the following methods
"Preset Channels Automatically"
or
"Preset Channels Manually".





```
LANGUAGE
▶ English
  Deutsch
  Français
  Italiano
  Español
  Nederlands
   Select ▲▼ and press OK
```

Fig. 2.

To go back to main menu
Keep pressing ⬅ .

To go back to the normal TV picture
Press MENU.

Note on the Demo function
If you choose Demo on the main menu, you can see a sequential demonstration of the menu functions.

With this method, you can preset all receivable channels at once.

To stop automatic channel presetting
Press ⬅ on the Remote Commander.

Notes
- After presetting the channels automatically, you can check which channels are stored on which programme positions. For details, see "Using the Programme Table" on page 45.
- You can exchange the programme positions to have them appear on screen in the order you like. For details, see "Exchanging the Programme Positions" on page 39.

❸ Preset channels automatically

1 Select `Preset` with Δ+ or ∇– and press OK.
The `PRESET` menu appears. (See Fig. 3.)

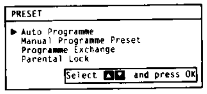
2 Select `Auto Programme` with Δ+ or ∇– and press OK.
The `AUTO PROGRAMME` menu appears. (See Fig. 4.)

3 Press OK.
Select if necessary the TV broadcast system with Δ+ or ∇– and press OK. (B/G for western European countries, D/K for eastern European countries) The first element of the "PROG" number will be highlighted.

4 Select the programme (number button) from which you want to start presetting. Select the first element of the double-digit number with Δ+ or ∇– or the number buttons (e.g. For "04", select "0" here) and press OK.
The second element of "PROG" will be highlighted.

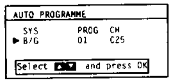
5 Select the second element of the double-digit number with Δ+ or ∇– or the number buttons (e.g. For "04", select "4" here) (See Fig. 5.) and press OK.

6 Select "C" or "S" with Δ+ or ∇– and press OK.
The automatic channel presetting starts.
When presetting is finished the preset menu reappears.
All available channels are now stored on successive number buttons.



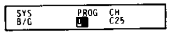
```
PRESET
▶ Auto Programme
  Manual Programme Preset
  Programme Exchange
  Parental Lock
          Select ▲▼ and press OK
```

Fig. 3.



```
AUTO PROGRAMME
  SYS       PROG  CH
▶ B/G       01    C25
 Select ▲▼ and press OK
```

Fig. 4.



```
SYS        PROG  CH
B/G              C25
```

Fig. 5.

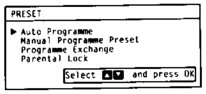
Use this method if there are only a few channels in your area to preset or if you want to preset channels one by one. You may also allocate programme numbers to various video input sources.

If you have made a mistake
Press ⬅ to go back to the previous position.
To go back to main menu
Keep pressing ⬅.
To go back to the normal TV picture
Press MENU.

❸ Preset channels manually

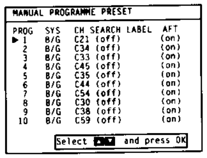
1 Select `Preset` with Δ+ or ∇– and press OK.
The `PRESET` menu appears. (See Fig. 6.)

2 Select `Manual Programme preset` with Δ+ or ∇– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig. 7.)



```
PRESET
▶ Auto Programme
  Manual Programme Preset
  Programme Exchange
  Parental Lock
          Select ▲▼ and press OK
```

Fig. 6.

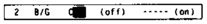


```
MANUAL PROGRAMME PRESET
PROG   SYS   CH  SEARCH LABEL  AFT
▶ 1    B/G   C21 (off)         (on)
  2    B/G   C34 (off)         (on)
  3    B/G   C33 (off)         (on)
  4    B/G   C45 (off)         (on)
  5    B/G   C35 (off)         (on)
  6    B/G   C44 (off)         (on)
  7    B/G   C54 (off)         (on)
  8    B/G   C30 (off)         (on)
  9    B/G   C38 (off)         (on)
 10    B/G   C59 (off)         (on)
        Select ▲▼ and press OK
```

Fig. 7.

3 Using △+ or ▽–, select the programme position (number button) to which you want to preset a channel, and press OK.

4 Select if necessary the TV broadcast system (B/G for western European countries, D/K for eastern European countries) or a video input source (EXT) with △+ or ▽–.
Then press OK. The CH position will be highlighted. (See Fig. 8.)

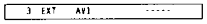


```
2  B/G  C█  (off)  ----- (on)
```

Fig.8.

To tune in a channel by frequency
After selecting F in step 5, enter three digits using the number buttons.

5 Using △+ or ▽–, select C (to preset a regular channel), or F (to tune in by frequency) and press OK.
The first element of the "CH" number will be highlighted.
If you have selected EXT in step 4, select the video input source with △+ or ▽–. (See Fig. 9.)



```
3  EXT   AV1           -----
```

Fig.9.

There are two ways to preset channels. If you know the channel number, go to step "6-Manual",

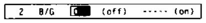
or

if you don't know the channel number, go to step "6- Search".

6 ***Manual***

-a Select the first element of the "CH" number with △+ / ▽– or the number buttons and press OK.
The second element of the "CH" number will be highlighted.

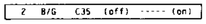
-b Select the second element of the number with △+ / ▽– or the number buttons.
The selected number appears. (See Fig. 10.)



```
2  B/G  █  (off)  ----- (on)
```

Fig.10.

-c Press OK
The "SEARCH" position is highlighted and the selected channel is now stored. (See Fig. 11.)



```
2  B/G  C35  (off)  ----- (on)
```

Fig.11.

-d Press OK until the cursor appears by the next programme position.

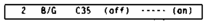
-e Repeat steps 3 to 6 to preset other channels.

If you have made a mistake
Press ⟵ to go back to the previous position.
To go back to main menu
Keep pressing ⟵.
To go back to the normal TV picture
Press MENU.

6 ***Search***

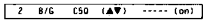
-a Press OK repeatedly until the colour of the SEARCH position changes.

-b Start searching for the channel with △+ (up) or ▽– (down).
The CH position changes colour. (See Fig. 12.)
The CH number starts counting up or downwards. When a channel is found, it stops. (See Fig. 13.)



```
2  B/G  C35  (off)  ----- (on)
```

Fig.12.



```
2  B/G  C50  (▲▼)  ----- (on)
```

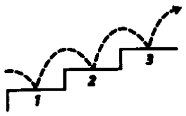
Fig.13.

-c Press OK if you want to store this channel. If not, press △+ or ▽– to continue channel searching.

-d Press OK until the cursor appears by the next programme position.

-e Repeat steps 3 to 6 to preset other channels.

1-3. ADDITIONAL PRESETTING FUNCTIONS

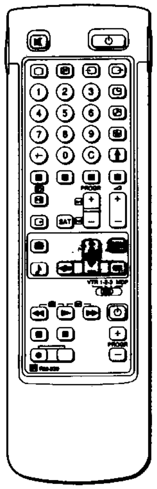


This section shows you additional presetting functions such as exchanging or skipping programme positions, captioning a station name, manual fine-tuning, and using the parental lock.

Before you begin

- Check that the Full Function side of the Remote Commander is visible
- Locate the Menu operation buttons.

PROGRAMME EXCHANGE



For programme positions beyond 15
The display scrolls automatically.

If you have made a mistake
Press ⟵ to go back to the previous position.
To go back to main menu
Keep pressing ⟵.
To go back to the normal TV picture
Press MENU.

Exchanging Programme Positions

With this function, you can exchange the programme positions to a preferable order.

1 Press MENU to display the main menu.

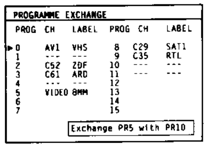
2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Programme Exchange` with △+ or ▽– and press OK.
The `PROGRAMME EXCHANGE` menu appears. (See Fig. 14.)

4 Using △+ or ▽–, select the programme position you want to exchange with another and press OK.
The colour of the selected position changes. (See Fig. 15.)

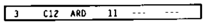
5 Using △+ or ▽–, select the programme posititon to be exchanged and press OK. Now the two programme positions have been exchanged. (See Fig. 16.)

6 Repeat steps 4 and 5 to exchange other programme positions.



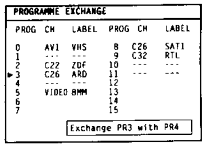
```
PROGRAMME EXCHANGE
 PROG  CH    LABEL  PROG  CH    LABEL

▶0     AV1   VHS      8   C29   SAT1
 1     ---   ---      9   C35   RTL
 2     C52   ZDF     10   ---   ---
 3     C61   ARD     11   ---   ---
 4     ---   ---     12
 5     VIDEO 8MM     13
 6                   14
 7                   15

            Exchange PR5 with PR10
```

Fig. 14.



```
3    C12  ARD    11   ---    ---
```

Fig. 15.



```
PROGRAMME EXCHANGE
 PROG  CH    LABEL  PROG  CH    LABEL

 0     AV1   VHS      8   C26   SAT1
 1     ---   ---      9   C32   RTL
 2     C22   ZDF     10   ---   ---
▶3     C26   ARD     11   ---   ---
 4     ---   ---     12
 5     VIDEO 8MM     13
 6                   14
 7                   15

            Exchange PR3 with PR4
```

Fig. 16.

Tuning in a Channel Temporarily

Ⓒ

You can tune in a channel temporarily, even when it has not been preset. Use the buttons on the Full-Function side of the Remote Commander.

1 Press C on the Remote Commander.
The indication "C" appears on the screen.

2 Enter the double-digit channel number using the number buttons (e.g. for channel 4, first press 0, then 4).
The channel appears.
However, the channel will not be stored.

MANUAL PROGRAMME PRESET

Skipping Programme Positions

You can skip unused programme positions when selecting programmes with the PROGR +/- buttons. However, the skipped programmes may still be called up when you use the number buttons.

1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

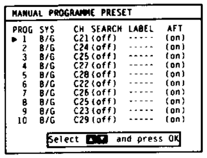
3 Select `Manual Programme Preset` with △+ or ▽– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig.18.)

4 Using △+ or ▽–, select the programme position which you want to skip and press OK.
The "SYSTEM" position changes colour.

5 Press △+ or ▽– until --- appears in the SYSTEM position. (See Fig. 18.)

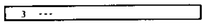
6 Press OK. (See Fig. 19)
When you select programmes using the PROGR +/- buttons, the programme position will be skipped.

7 Repeat steps 4 to 6 to skip other programme positions.



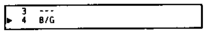
```
MANUAL  PROGRAMME  PRESET
PROG  SYS    CH  SEARCH  LABEL   AFT
▶ 1   B/G    C21 (off)   -----   (on)
  2   B/G    C24 (off)   -----   (on)
  3   B/G    C25 (off)   -----   (on)
  4   B/G    C27 (off)   -----   (on)
  5   B/G    C28 (off)   -----   (on)
  6   B/G    C22 (off)   -----   (on)
  7   B/G    C26 (off)   -----   (on)
  8   B/G    C25 (off)   -----   (on)
  9   B/G    C23 (off)   -----   (on)
 10   B/G    C29 (off)   -----   (on)

        Select ▲▼  and press OK
```

Fig. 17.



```
  3   ---
```

Fig. 18.



```
  3   ---
▶ 4   B/G
```

Fig. 19.

MANUAL PROGRAMME PRESET

Captioning a Station Name

You can "name" a channel or an input video source using up to five characters (letters or numbers) to be displayed on the TV screen (e.g. ZDF). Using this function, you can easily identify which channel or video source you are watching.

1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Manual Programme Preset` with △+ or ▽– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig. 20.)

4 Using △+ or ▽–, select the programme position you want to caption and press OK repeatedly until the first element of the LABEL position is highlighted.

5 Select a letter or number with △+ or ▽– and press OK.The next element will be highlighted.
Select other characters in the same way. If you want to leave an element blank, select – and press OK. (See Fig. 21.)

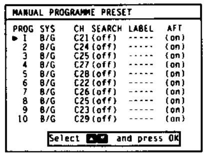
6 After selecting all the characters, press OK repeatedly until the cursor appears by the next programme position (at the left margin). Now the caption you chose is stored. (See Fig. 22.)

7 Repeat steps 5 and 6 to caption names for other channels.

If you have made a mistake
Press ⬅ to go back to the previous position.

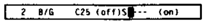
To go back to main menu
Keep pressing ⬅.

To go back to the normal TV picture
Press MENU.



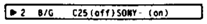
```
MANUAL  PROGRAMME  PRESET
PROG  SYS    CH  SEARCH  LABEL   AFT
▶ I   B/G    C21 (off)   -----   (on)
  2   B/G    C24 (off)   -----   (on)
  3   B/G    C25 (off)   -----   (on)
  4   B/G    C27 (off)   -----   (on)
  5   B/G    C28 (off)   -----   (on)
  6   B/G    C22 (off)   -----   (on)
  7   B/G    C26 (off)   -----   (on)
  8   B/G    C25 (off)   -----   (on)
  9   B/G    C23 (off)   -----   (on)
 10   B/G    C29 (off)   -----   (on)

        Select ▲▼  and press OK
```

Fig. 20.



```
  2   B/G     C25 (off)S█---   (on)
```

Fig. 21.



```
▶ 2   B/G    C25 (off)SONY-  (on)
```

Fig. 22.

[illegible]

Manual Fine-Tuning

Normally, the AFT(automatic fine-tuning) is already operating. However, if the picture is distorted, you can use the manual fine tuning function to obtain better picture reception.

1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Manual Programme Preset` with △+ or ▽– and press OK.
The `MANUAL PROGRAMME PRESET` menu appears. (See Fig. 23.)

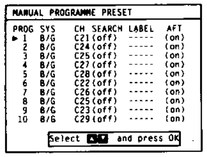
4 Using △+ or ▽–, select the programme position corresponding to the channel which you want to manually fine-tune, and press OK repeatedly until the AFT position changes colour.

5 Fine-tune the channel with △+ or ▽– so that you get the best TV reception. As you press the cursor buttons, the frequency changes from -15 to +15. (See Fig. 24.)

6 After fine tuning, press OK.
The cursor appears beside the next programme position (at the left margin). (See Fig. 25.) Now the fine-tuned level is stored.

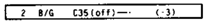
7 Repeat steps 4 to 6 to fine-tune other channels.

To reactivate AFT (automatic fine tuning)
Repeat from the beginning and select "ON" in step 5.



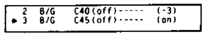
```
MANUAL  PROGRAMME  PRESET
PROG  SYS    CH  SEARCH  LABEL   AFT
▶ 1   B/G    C21 (off)   -----   (on)
  2   B/G    C24 (off)   -----   (on)
  3   B/G    C25 (off)   -----   (on)
  4   B/G    C27 (off)   -----   (on)
  5   B/G    C28 (off)   -----   (on)
  6   B/G    C22 (off)   -----   (on)
  7   B/G    C26 (off)   -----   (on)
  8   B/G    C25 (off)   -----   (on)
  9   B/G    C23 (off)   -----   (on)
 10   B/G    C29 (off)   -----   (on)

        Select ▲▼  and press OK
```

Fig. 23.



```
  2   B/G    C35 (off)—·        (-3)
```

Fig. 24.



```
  2   B/G    C40 (off)-----    (-3)
▶ 3   B/G    C45 (off)-----    (on)
```

Fig. 25.

PARENTAL LOCK

Parental Lock

You can prevent undesirable broadcasts from appearing on the screen. We suggest you use this function to prevent children from watching programmes which you consider unsuitable.

1 Press MENU to display the main menu.

2 Select `Preset` with △+ or ▽– and press OK.
The `PRESET` menu appears.

3 Select `Parental Lock` with △+ or ▽– and press OK.
The `PARENTAL LOCK` menu appears. (See Fig. 26.)

4 Using △+ or ▽–, select the programme position you want to block and press OK.
The selected PROG number, CH and LABEL change colour indicating that this programme is now blocked. (See Fig. 27.)

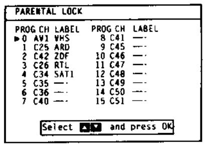
5 Repeat step 4 to block other programme positions.

Cancelling blocking

1 On the `PARENTAL LOCK` menu, select the programme position you want to unblock with △+ or ▽–.

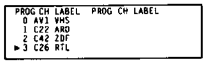
2 Press OK.
The selected PROG number, CH and LABEL change colour to normal colour indicating that the blocking has been cancelled.

If you try to select a programme that has been blocked
The message "Locked" appears on the blank TV screen.



```
PARENTAL  LOCK
PROG CH  LABEL    PROG CH  LABEL
▶0  AV1  VHS        8 C41  —-
 1  C25  ARD        9 C45  —-
 2  C42  ZDF       10 C46  —-
 3  C26  RTL       11 C47  —-
 4  C34  SAT1      12 C48  —-
 5  C35  —-        13 C49  —-
 6  C36  —-        14 C50  —-
 7  C40  —-        15 C51  —-

        Select ▲▼  and press OK
```

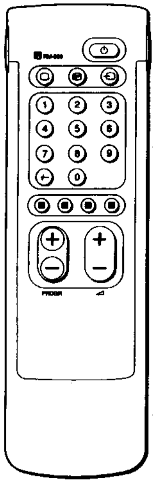
Fig. 26.



```
PROG CH  LABEL    PROG CH  LABEL
 0  AV1  VHS
 1  C22  ARD
 2  C42  ZDF
▶3  C26  RTL
```

Fig. 27.

1-4. WATCHING THE TV



If no picture appears when you depress ⏻ on the TV

and if the standby indicator on the TV is lit, the TV is in standby mode. Press ○ or one of the number buttons to switch it on.

This section explains the basic functions you use while watching TV. Most of the operations can be done using the simple side of the Remote Commander.

Switching the TV on and off

Switching on

Depress ⏻on the TV.

Switching off temporarily

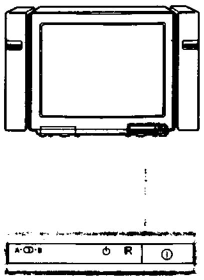
Press ⏻ on the Remote Commander.
The TV enters standby mode and the standby indicator on the front of the TV lights up.

To switch on again

Press ○, PROGR +/–, or one of the number buttons on the Remote Commander.

Switching off completely

Depress ⏻ on the TV.



Selecting TV Programmes

Press PROGR +/– or press number buttons.

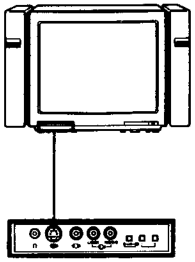
To select a double-digit number

Press -/—, then the numbers.
For example, if you want to choose 23, press -/—, 2, and 3.

Adjusting the Volume

Press ◢/–.

Operating the TV Using the Buttons on the TV



With the buttons on the TV, you can select programmes, adjust the volume, and select video input sources.

- Press P-◿-⊖ button repeatedly until the programme number, ◿ (for volume), or -⊖ (for video input picture) appears. Then adjust with the –/+ buttons.
- Press –/+ buttons to switch on the TV from the standby mode.
- Press –/+ simultaneously to reset picture and sound controls to the factory preset level (RESET function.)

Watching Teletext or Video Input

For details of the teletext operation, refer to page 47.

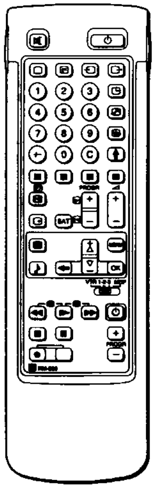
Watching teletext

- Press ⊜ to view the teletext.
- Press three number buttons to select a page.
- Press one of the coloured buttons for fastext operation.
- Press ⊕ (PAGE +) or ⊖ (PAGE –) for the next or preceeding page.
- To go back to the normal TV picture, press ○.

For details of the video input picture, refer to page 51.

Watching a video input picture

Press -⊖ repeatedly until the desired video input appears. To go back to the normal TV picture, press ○.



More Convenient Functions

Use the Full-Function side of the Remote Commander.

Displaying the on screen indications

- Press ⊕ once to display all the indications. They will disappear after some seconds.
- Press ⊕ twice to have the programme number and label stay on screen. Press twice again to make indications disappear.

Muting the sound.

Press 🔇.
To resume normal sound, press 🔇 again.

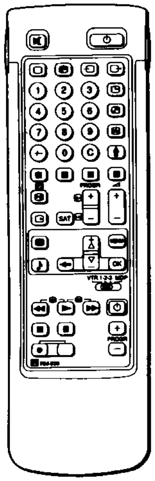
Displaying the time

Press ◷. This function is available only when teletext is broadcast.
To make the time display disappear, press ◷ again.

1-5. ADJUSTING AND SETTING THE TV USING THE MENU

PICTURE CONTROL

SOUND CONTROL



If you have made a mistake
Press ⇐ to go back to the previous position.
To go back to the main menu
Keep pressing ⇐.
To go back to the normal TV picture
Press MENU.

Note
HUE is only available for NTSC colour system and RESOLUTION does not work for SECAM colour system.

Note on LINE OUT
The audio level and the dual sound mode output from the ⊖• jack on the rear correspond to the HEADPHONES VOLUME and DUAL SOUND settings.

When watching video input picture
You can select DUAL SOUND to change the sound.

Adjusting the Picture and Sound

Although the picture and sound are adjusted at the factory, you can adjust them to suit your own taste. In addition, you can change the aspect ratio of the TV display for wide screen effect, or set the resolution to obtain a higher quality picture. You can also select dual sound (bilingual) programmes when available or adjust the sound for listening with the headphones.

1 Press ● (for picture) or ♪ (for sound) on the Remote Commander.

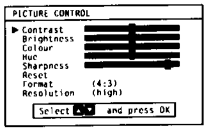
or

Press MENU and select `Picture Control` or `Sound Control`, then press OK.
The `PICTURE CONTROL` or `SOUND CONTROL` menu appears. (See Fig. 28 or Fig. 29)

2 Using + or –, select the item you want to adjust and press OK.The selected item changes colour. (See Fig. 30)

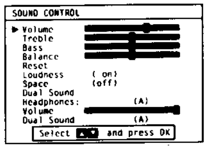
3 Adjust the setting with + or – and press OK.
The cursor appears beside the next item (at the left margin). (See Fig. 31)
For the effect of each control, see the table below.

4 Repeat steps 2 and 3 to adjust other items.



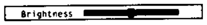
```
PICTURE CONTROL
▶ Contrast
  Brightness
  Colour
  Hue
  Sharpness
  Reset
  Format        (4:3)
  Resolution    (high)
   Select ▲▼  and press OK
```

Fig. 28.



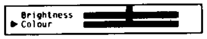
```
SOUND CONTROL
▶ Volume
  Treble
  Bass
  Balance
  Reset
  Loudness      ( on)
  Space         (off)
  Dual Sound
  Headphones:          (A)
  Volume
  Dual Sound           (A)
   Select ▲▼  and press OK
```

Fig. 29.



```
  Brightness
```

Fig. 30.



```
  Brightness
▶ Colour
```

Fig. 31.

Effect of each control

PICTURE CONTROL	Effect	
Contrast	Less —+— More	
Brightness	Darker —+— Brighter	
Colour	Less —+— More	
Hue	Greenish —+— Reddish	
Sharpness	Softer —+— Sharper	
Reset	Resets picture to the factory preset levels.	
Format	4 : 3 : Normal	16 : 9 : Wide screen effect
Resolution	Normal	High : Obtain a higher quality picture

SOUND CONTROL	Effect	
Volume	Less —+— More	
Treble	Less —+— More	
Bass	Less —+— More	
Balance	More left —+— More right	
Reset	Resets sound to the factory preset levels.	
Loudness	off : Normal	on : When listening to low volume sound.
Space	off : Normal	on : Obtain acoustic sound effect.
Dual Sound	A : left channel B : right channel stereo mono The selected mode of the A-⊂⊃-B indicator on the TV lights up.	
Headphones: Volume	Less —+— More	
Dual Sound	A : left channel B : right channel stereo mono	

PROGRAMME TABLE

To select a programme using this menu
Select the programme number with + or – and press OK.
The selected programme appears.

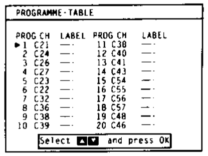
To go back to the normal TV picture
Press MENU.

Using the Programme Table

On this table, you can see which channel is preset to which programme position. You can also select programmes using this table.

From the main menu, select `Programme Table` with + or – and press OK.
The `PROGRAMME TABLE` menu appears. (See Fig. 32)

To scroll to higher programme numbers, press –.



```
PROGRAMME-TABLE

PROG CH  LABEL  PROG CH  LABEL
▶ 1 C21  —-      11 C38   —-
  2 C24  —-      12 C40   —-
  3 C26  —-      13 C41   —-
  4 C27  —-      14 C43   —-
  5 C23  —-      15 C54   —-
  6 C22  —-      16 C55   —-
  7 C32  —-      17 C56   —-
  8 C36  —-      18 C57   —-
  9 C38  —-      19 C48   —-
 10 C39  —-      20 C46   —-
   Select ▲▼  and press OK
```

Fig. 32.

TIMER

To switch off the timer
Select "OFF" in step 3.

To check the remaining time
Press ⊕.

Using the Sleep Timer

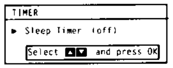
You can select a time period after which the TV automatically switches into standby mode.

1 From the main menu, select `Timer` with + or – and press OK.
The `Timer` menu appears. (See Fig. 33.)

2 Press OK.
The time period option changes colour.

3 Select the time period with + or –.
The time period (in minutes) changes as follows:
10→20→30→40→50→60→70→80→90
↑———— OFF ————┘

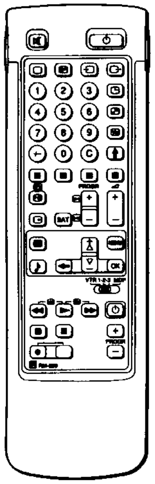
4 After selecting the time period, press OK.
The cursor moves back to the left margin and the timer starts counting.
One minute before the TV switches into standby mode, a message is displayed on the screen.



```
TIMER
▶ Sleep Timer  (off)
   Select ▲▼  and press OK
```

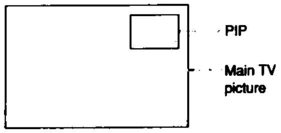
Fig. 33.

1-6. PIP (PICTURE IN PICTURE)



Note
RGB input source cannot be displayed in PIP.

With this function you can display a "PIP screen" (small picture) within the main TV picture. In this way you can watch or monitor the video output from any connected equipment (for example from a VTR) while watching TV or vice versa. For information about connection of other equipment, refer to page 50.



Switching PIP on and off

Press ◔ .
The PIP screen will be displayed. The PIP picture will come from the source chosen when the TV was last used.

To switch PIP off
Press ◔ again.

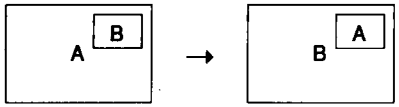
Selecting a PIP source

Press ⬆.
The symbol ⬆ will be displayed at the bottom, left-hand corner of the screen.
Press ⇥ repeatedly until the desired PIP source is indicated (e.g. TV, AV1, AV2, YC2, AV3, YC3, AV4, YC4).

Note
If no video source has been connected, the PIP picture will be noisy.

Swapping screens

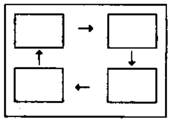
Press ⧉.
The main screen will switch the picture with the PIP screen.



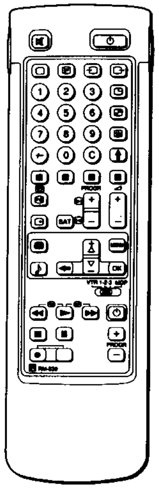
Note
If a TV programme is on the PIP screen and a video source on the main picture, and you want to change channels, first press ⬆ and then the programme buttons or PROGR +/–.

Changing the position of the PIP

Press ◫ repeatedly to change the position of the PIP screen within the main screen. There are four different positions available.



1-7. TELETEXT



Note
Teletext errors may occur if the broadcasting signals are weak.

With the simple side of the Remote Commander
You can switch teletext on and off, operate Fastext, and directly select page numbers.

TV stations broadcast an information service called Teletext via the TV channels. Teletext service allows you to receive various information pages such as weather reports or news at any time you want. For advanced teletext operation, use the buttons on the Full-Function side of the Remote Commander.

Direct Access Functions

Switching Teletext on and off

1 Select the TV channel which carries the teletext broadcast you want to watch.

2 Press ⊜ to switch on teletext.
A teletext page will be displayed (usually the index page).If there is no teletext broadcast, P100 is displayed on the information line at the top of the screen.

To switch teletext off
Press ○.

Selecting a teletext page

With direct page selection

Use the number buttons to input the three digits of the chosen page number.
If you have made a mistake, type in any three digits. Then reenter the correct page number.

With page-catching

1 Select a teletext page with a page overview (e.g. index page).

2 Press ⊞ twice. "Page catching " will be displayed on the information line. The last digit of the first displayed page number flashes.

3 Using △+ or ▽–, select the desired page and press OK.
The requested page will appear in a few seconds.

Accessing next or preceding page

Press ⊡ (PAGE +) or ⊡ (PAGE –).
The next or preceding page appears.

Superimposing the teletext display on the TV programme

- Press ⊜ once in teletext mode or twice in TV mode.
- Press ⊜ again to resume normal teletext reception.

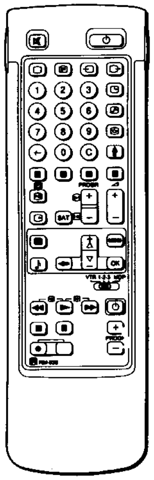
Preventing a teletext page from being updated

- Press ⊞ (HOLD). The HOLD symbol "⊞" displayed on the information line.
- Press ⊜ to resume normal teletext reception.

Using Fastext

Note
Fastext operation is only possible, if the TV station broadcasts Fastext signals.

With Fastext you can access pages with one key stroke.When a Fastext page is broadcast, a colour-coded menu will appear at the bottom of the screen. The colours of this menu correspond to the red, green, yellow and blue buttons on the Remote Commander.
Press the corresponding coloured button on the Remote Commander which corresponds to the colour-coded menu. The page will be displayed after some seconds.



Note
Some of the features may not be available depending on the Teletext service.

To cancel the request
Press OK to select "OFF" for the TIME PAGE setting.

Using the Teletext Menu

This TV is provided with a menu-guided teletext system. When teletext is switched on, you can use the menu buttons to operate the teletext menu. Select the teletext menu functions in the following way:

1 Press MENU. The menu will be superimposed on the teletext display. (See Fig. 34)

2 Using △+ or ▽–, select the teletext function you want and press OK. (See Fig. 35)

USER PAGES/PRESET USER PAGES

See page 49 for information about presetting and operating the user pages.

INDEX

The index will give you an overview of the contents of the teletext and the page numbers.

TOP/BOTTOM/FULL

For convenient reading of a teletext page, you can enlarge the teletext display. After having selected the function, an information line `Top/Bottom/Full` will be displayed. (See Fig. 36)

Press △+ for Top to enlarge the uper half, ▽– for Bottom to enlarge the lower one and OK for Full to resume the normal size.

Press ⊜ to resume normal teletext reception.

TEXT CLEAR

After having selected the function, you can watch a TV programme while waiting for a teletext page to be displayed. (See Fig. 37)

Press ⊜ to resume normal teletext reception.

SUBTITLES

Your teletext service will inform you if a TV programme is subtitled. After having selected the function the subtitles will be displayed.

REVEAL

Sometimes pages contain concealed information, such as answers to a quiz. The reveal option lets you disclose the information. After having selected the function, an information line "REVEAL ON/OFF" will be displayed. (See Fig. 38)

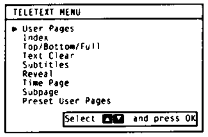
Using △+ or ▽–, select ON to reveal the information or OFF to conceal it again.

Press ⊜ to resume normal teletext reception.

TIME PAGE

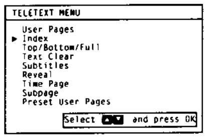
Your teletext service will inform you, if a time coded page is available. You may have a page (e.g. an alarm page) displayed at a certain time.

1 Press OK to select ON for the `Time Page` setting. The TV programme you were watching before you selected `Time Page` is restored. An information window will be displayed at



TELETEXT MENU
▶ User Pages
Index
Top/Bottom/Full
Text Clear
Subtitles
Reveal
Time Page
Subpage
Preset User Pages

Fig. 34.



TELETEXT MENU
User Pages
▶ Index
Top/Bottom/Full
Text Clear
Subtitles
Reveal
Time Page
Subpage
Preset User Pages

Fig. 35.

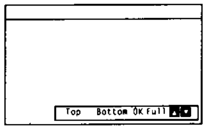


Fig. 36.

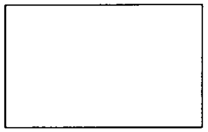


Fig. 37.

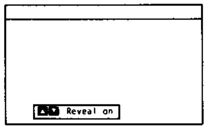


Fig. 38.

To cancel the request
Select "OFF" for the SUBPAGE setting and press OK.

If two broadcasting stations use the same Teletext
You can preset one bank to 2 different programme positions.

3 To select the desired time, enter four digits for the desired time (e.g. 1800) using the number buttons and press OK. The selected time is displayed at the top in the left-handed corner. At the requested time, the page will be displayed.

Press ⊜ to resume normal teletext mode.

SUBPAGE

You may want to select a particular teletext page from several subpages which are rotated automatically. If you want to select one subpage, follow the operations below:

1 Using △+ or ▽–, select ON for the SUBPAGE setting and press OK.

2 To select the desired subpage, enter four digits using PROG +/– or the number buttons. (e.g. enter 0002 for the second page of a sequence).

User Page Bank System

You can store up to 30 pages in the "Teletext page bank system". In this way you have quick access to the pages you watch frequently.

Storing pages

There are 5 "banks" (A to E) for 5 teletext stations. In each bank you can store 6 preferred pages (P1 to P6).

1 Press ⊜ (if Teletext is not on already) and MENU to show the TELETEXT MENU display.

2 Select `Preset User` Pages with △+ or ▽– and press OK.

3 Select the desired bank with △+ or ▽– and press OK. The cursor will go to the first position (P1) of the preferred pages.

4 Input the three digits of your first preferred page with the number buttons and press OK.
The cursor will go to the second position.

5 Repeat step 4 for the other 5 page numbers you want to preset. If you do not want to preset all 6 page numbers available, press OK without inserting any number. After having finished the presetting press OK repeatedly until the cursor appears besides the next bank at the left margin.

6 Select `Allocate Bank` with △+ or ▽– and press OK.

7 Select the programme position for which you want to preset pages with △+ or ▽– and press OK. (See Fig. 39)

8 Select the desired bank with △+ or ▽– (Banks A to E are available) and press OK.

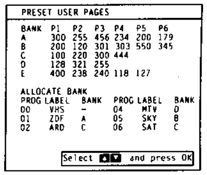
9 Repeat steps 3 to 8 for the other 4 banks available.

Displaying User Pages

1 Select MENU.

2 Select `User Pages` with △+ or ▽– and press OK.
A table of the stored preferred pages will be displayed. (See Fig. 40)

3 Select the desired page with △+ or ▽– and press OK. The page will be displayed after some seconds.



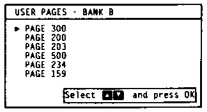
PRESET USER PAGES

BANK	P1	P2	P3	P4	P5	P6
A	300	255	456	234	200	179
B	200	120	301	303	550	345
C	100	220	300	444		
D	128	321	255			
E	400	238	240	118	127	

ALLOCATE BANK

PROG	LABEL	BANK	PROG	LABEL	BANK
00	VHS	–	04	MTV	D
01	ZDF	A	05	SKY	B
02	ARD	C	06	SAT	C

Fig. 39.



USER PAGES - BANK B
▶ PAGE 300
PAGE 200
PAGE 203
PAGE 500
PAGE 234
PAGE 159

Fig. 40.

1-8. CONNECTING AND OPERATING OPTIONAL EQUIPMENT

To connect a VTR using the ‖ terminal
Connect the aerial output of the VTR to the aerial terminal ‖ of the TV.
We recommend that you tune in the video signal to programme number "0". For details see "Preset channels manually" on page 37.

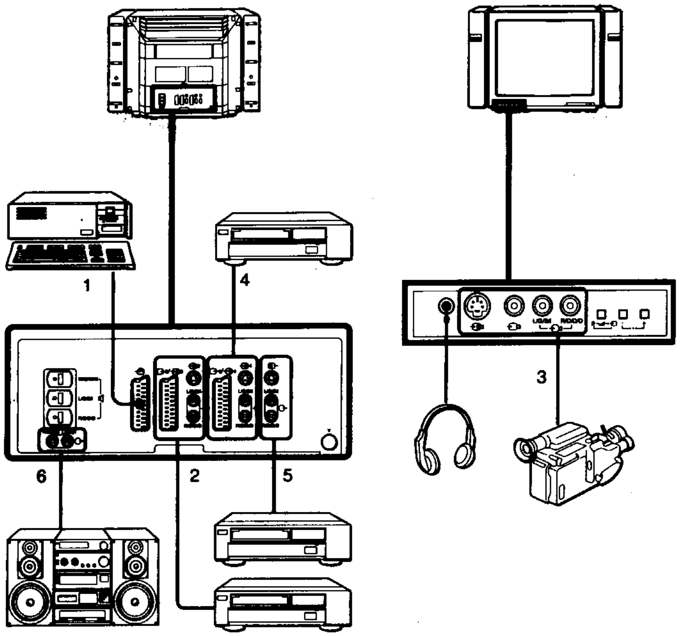
If the picture or the sound is distorted
Move the VTR away from the TV.

S-video input (Y/C input)
Video signals may be separated into Y (luminance or brightness) and C (chrominance) signals. Separating the Y and C signals prevents them from interfering with one another, and therefore improves picture quality (especially luminance). This TV is equipped with 3 S-Video input jacks through which these separated signals can be input directly.

When connecting a monaural VTR
Connect only the white -⊙ jack to both the TV and VTR.

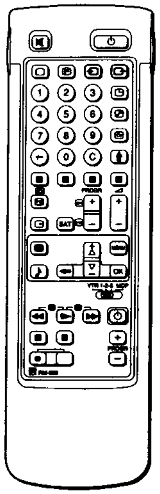
Connecting Optional Equipment

You can connect optional audio-video equipment to this TV such as VTRs, video disc players, and stereo systems.



Acceptable input signal	Available output signal
1 Normal audio/video and RGB signal	Video/audio from TV tuner
2 Normal audio/video and S video signal	Video/audio from selected source
3 Normal audio/video and S video signal	No outputs
4 Normal audio/video and S video signal	Video/audio displayed on TV screen (monitor out)
5 No inputs	S video/audio signal displayed on TV screen (monitor out)
6 No inputs	Audio signal (variable)

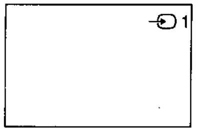
Selecting input with PROGR +/– or number buttons
You can preset video input sources to the programme positions so that you can select them with PROGR +/– or number buttons.
For details, see "Preset channels manually" on page 37.



Selecting input and output

This section explains how to view the video input picture (of the video source connected to your TV), and how to select the output signal using direct access buttons or the menu system.

Selecting input



Press -⊙ repeatedly to select the input source.

The symbol of the selected input source will appear.

To go back to the normal TV picture

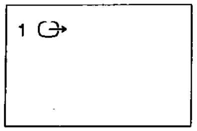
Press ▢.

Input modes

Symbol	Input signal
-⊙ 1	Audio/video input through the -⊚ 1 connector
-⊚	RGB input through the -⊚ 1 connector
-⊙ 2	Audio/video input through the ⊖→2/-Ⓢ2 connector
-Ⓢ 2	S video input through the ⊖→2/-Ⓢ2 or -Ⓢ2 connector
-⊙ 3	Audio/video input through -⊙3 and -⊙3 on the front
-Ⓢ 3	S video input through the -Ⓢ3 connectors on the front (4-pin connector)
-⊙ 4	Audio/video input through the ⊖→4/-Ⓢ4 connector
-Ⓢ 4	S video input through the ⊖→4/-Ⓢ4 or -Ⓢ4 connector (4-pin connector)

You can also select the input mode using the P→⊿→-⊙ and –/+ buttons on the TV. In this case, first select -⊙, and then press –/+ buttons to select the input.

Selecting the output



The ⊖→2/-Ⓢ2 connector outputs the source input from the other connectors.

Press ⊖→ repeatedly to select the output.
The symbol of the selected output source appears.

Output modes

Symbol	⊖→2/-Ⓢ2 connector outputs
1 ⊖→	The audio/video signal from the -⊚ 1 connector
2 ⊖→	The audio/video signal from the ⊖→2/-Ⓢ2 connector
2 Ⓢ→	The audio/S video signal from the ⊖→2/-Ⓢ connector
3 ⊖→	The audio/video signal from the -⊙3, -⊙3 connectors
3 Ⓢ→	The audio/S video signal from the -Ⓢ3, -⊙3 connectors
4 ⊖→	The audio/video signal from the ⊖→4/-Ⓢ4 connector
4 Ⓢ→	The audio/S video signal from the ⊖→4/-Ⓢ4 connector
TV⊖→	The audio/video signal from the ‖ aerial terminal

Checking and selecting the input and output sources using the menu

You can display the menu to see which input sources are selected for the TV screen and PIP screen, and which output source is selected. You can also select them on the menu display.

1 Select `Video Connection` with + or – and press OK. The `VIDEO CONNECTION` menu appears. (See Fig. 41)
You can see which source is selected for the TV and PIP input, and for the output. If you want to select the input and output on this menu, go on to the next step.

2 Select TV Screen (input source for the TV screen), PIP(input source for the PIP screen), or output (output source) with + or – and press OK. One of the source items changes colour. (See Fig. 42)

3 Select the desired source with + or –. (See Fig. 43)
For details about each source, see the table on page 23.

4 Press OK.
The selected source is confirmed, and the cursor appears. (See Fig. 44)

5 Repeat steps 2 to 4 to select the source for other inputs or outputs.

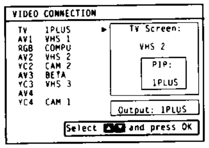

VIDEO CONNECTION
TV 1PLUS
AV1 VHS 1
RGB COMPU
AV2 VHS 2
YC2 CAM 2
AV3 BETA
YC3 VHS 3
AV4
YC4 CAM 1
TV Screen:
VHS 2
PIP:
1PLUS
Output: 1PLUS
Select ▲▼ and press OK

Fig. 41.

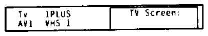

Tv 1PLUS
AV1 VHS 1
TV Screen:

Fig. 42.

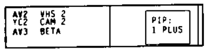

AV2 VHS 2
YC2 CAM 2
AV3 BETA
PIP:
1 PLUS

Fig. 43.

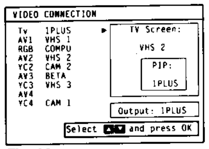

VIDEO CONNECTION
Tv 1PLUS
AV1 VHS 1
RGB COMPU
AV2 VHS 2
YC2 CAM 2
AV3 BETA
YC3 VHS 3
AV4
YC4 CAM 1
TV Screen:
VHS 2
PIP:
1PLUS
Output: 1PLUS
Select ▲▼ and press OK

Fig. 44.

Remote Control of Other Sony Equipment

You can use the TV Remote Commander to control most of Sony remote-controlled video equipment such as: Beta, 8mm or VHS VTRs or video disc players.

Tuning the Remote Commander to the equipment

1 Set the VTR 1/2/3 MDP selector according to the equipment you want to control:

VTR 1: Beta or ED Beta VTR

VTR 2: 8mm VTR

VTR 3: VHS VTR

MDP: Video disc player

2 Use the buttons indicated in the illustration to operate the additional equipment.

If your video equipment is furnished with a COMMAND MODE selector: set this selector to the same position as the VTR 1/2/3 MDP selector on the TV Remote Commander.

If the equipment does not have a certain function, the corresponding button on the Remote Commander will not operate.

When recording
When you use the ● (record) button, make sure to press this button and the one to the right of it simultaneously.

1-9. FOR YOUR INFORMATION

Troubleshooting

Here are some simple solutions to problems which may affect the picture and sound.

Problem	Solution
No picture (screen is dark), no sound	• Plug the TV in. • Press ⏻ on the TV. (If ⏻ indicator is on, press ▢ or a programme number on the Remote Commander.) • Check the aerial connection. • Check if the selected video source is on. • Turn the TV off for 3 or 4 seconds and then turn it on again using ⏻.
Poor or no picture (screen is dark), but good sound	• Press ■ to enter the `PICTURE CONTROL` menu and adjust `BRIGHTNESS`, `CONTRAST` and `COLOUR`.
Good picture but no sound	• Press ◿ +. • Check loudspeakers connection. • If 🔇 is displayed on the screen, press 🔇.
No colour for colour programmes	• Press ■ to enter the `PICTURE CONTROL` menu, select `RESET`, then press `OK`.
Remote Commander does not function.	• Replace batteries.

If you continue to have problems, have your TV serviced by qualified personnel. Never open the casing yourself.

Television Channel Number Guide (UK model only)

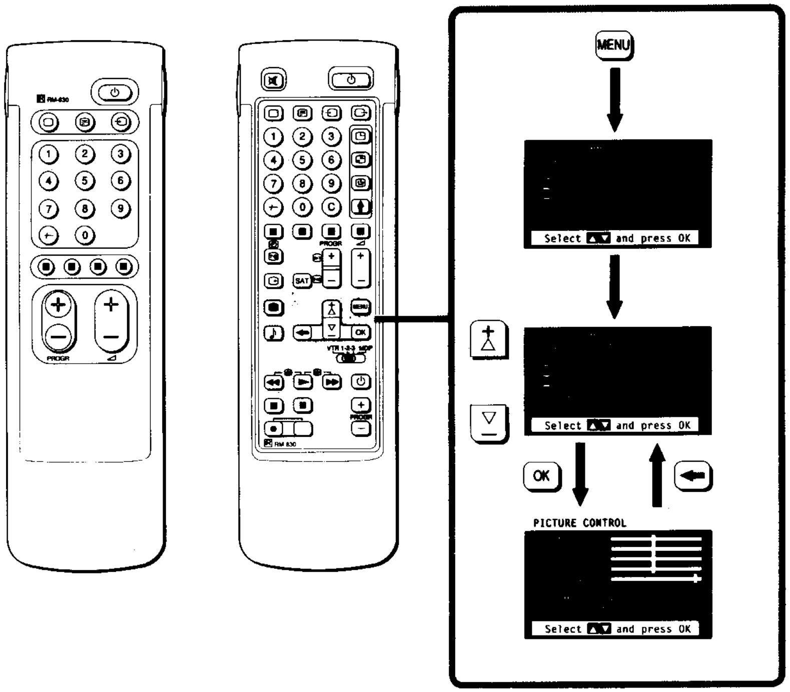
Only the main transmitters are listed. Information regarding the regional sub-relay channel numbers can be obtained by contacting The BBC Engineering Information Dept. (081) 752 5040.

MAIN TRANSMITTERS	BBC1	BBC2	ITV	CH4
London & South East				
Bluebell Hill	40	46	43	65
Crystal Palace	26	33	23	30
Dover	50	56	66	53
Heathfield	49	52	64	67
Oxford	57	63	60	53
South-West				
Beacon Hill	57	63	60	53
Caradon Hill	22	28	25	32
Huntshaw Cross	55	62	59	65
Redruth	51	44	41	47
Stockland Hill	33	26	23	29
Channel Islands				
Fremont Point	51	44	41	47
South				
Hannington	39	45	42	66
Midhurst	61	55	58	68
Rowridge	31	24	27	21
West				
Mendip	58	64	61	54
East				
Sandy Heath	31	27	24	21
Sudbury	51	44	41	47
Tacolneston	62	55	59	65
Midlands				
Ridge Hill	22	28	25	32
Sutton Coldfield	46	40	43	50
The Wrekin	26	33	23	29
Wakham	53	64	61	54
Northern Ireland				
Brougher Mountain	22	28	25	32
Divis	31	27	24	21
Limavady	55	62	59	65
North				
Belmont	22	29	25	32
Emley Moor	44	51	47	41
North-West				
Winter Hill	55	62	59	65
Douglas (IOM)	68	66	48	56
North-East				
Bilsdale West Moor	33	26	29	23
Caldbeck	30	34	28	32
Chatton	39	45	49	42
Pontop Pike	56	64	61	54
Laxey (IOM)	58	64	61	54
Scotland				
Angus	57	63	60	53
Black Hill	40	46	43	50
Sandale	22	–	–	–
Caldbeck	–	34	28	32
Craigkelly	31	27	24	21
Darvel	33	26	23	29
Durris	22	28	25	32
Eitshal	33	26	23	29
Keelylang Hill	40	46	43	50
Knock More	33	26	23	29
Rosemarkie	39	45	49	42
Rumster Forest	31	27	24	21
Selkirk	55	62	59	65
Wales				
Blaenplwyf	31	27	24	21
Carmel	57	63	60	53
Llanddona	57	63	60	53
Moel-y-Parc	52	45	49	42
Presely	46	40	43	50
Wenvoe	44	51	41	47

TV - Funktionen
TV operation
TV - bediening
Utilisation TV
Funzioni TV

PIP - Funktionen
PIP operation
PIP - bediening
Utilisation PIP
Funzioni PIP

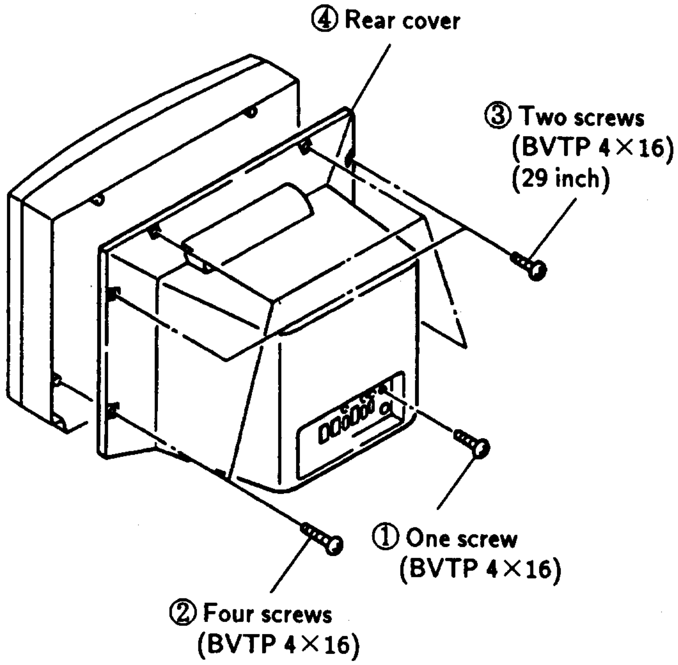
Video - Funktionen
Video operation
Video - bediening
Utilisation vidéo
Funzioni video



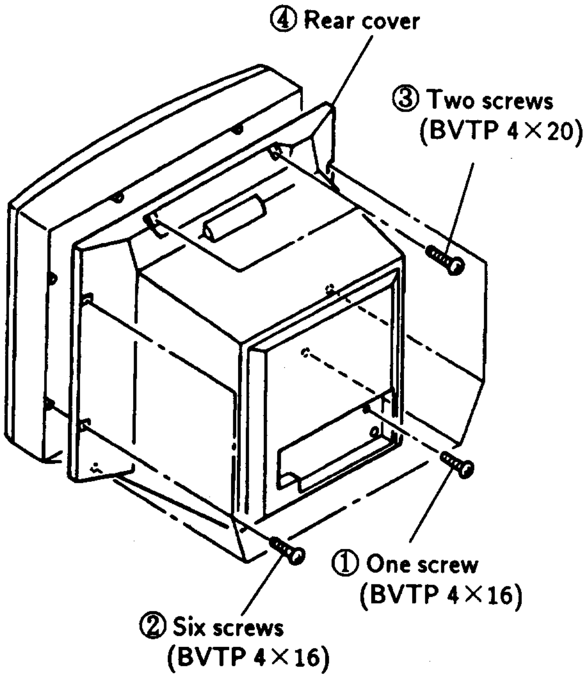
MEMO

SECTION 2
DISASSEMBLY

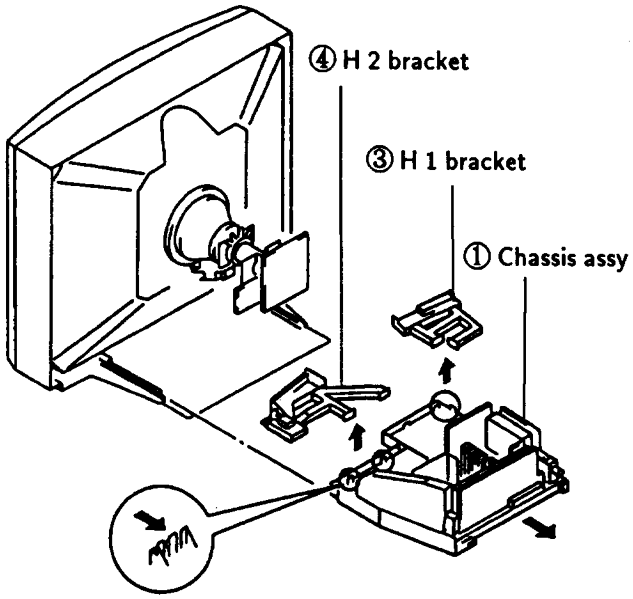
2-1-1. REAR COVER REMOVAL (25 inch, 29 inch)


④ Rear cover
③ Two screws (BVTP 4×16) (29 inch)
① One screw (BVTP 4×16)
② Four screws (BVTP 4×16)

2-1-2. REAR COVER REMOVAL (34 inch)

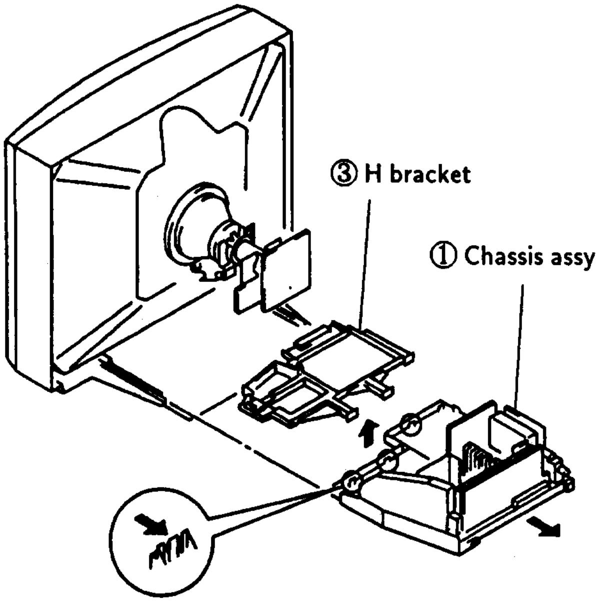

④ Rear cover
③ Two screws (BVTP 4×20)
① One screw (BVTP 4×16)
② Six screws (BVTP 4×16)

2-2-1. CHASSIS ASSY REMOVAL (25 inch, 29 inch)


④ H 2 bracket
③ H 1 bracket
① Chassis assy

② Push the four claws of the main chassis in the direction of the arrow and remove the H 1 and H 2 bracket upwards.

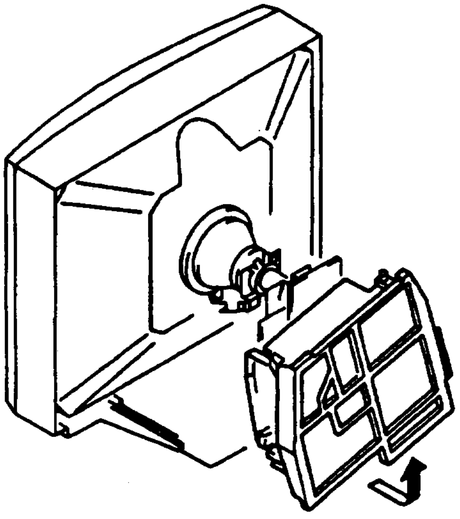
2-2-2. CHASSIS ASSY REMOVAL (34 inch)

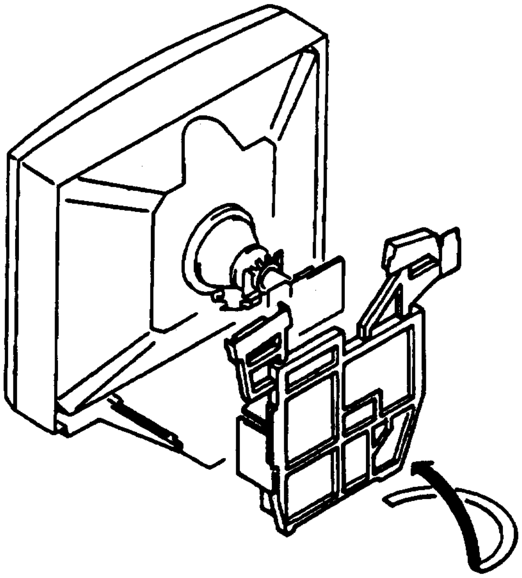

③ H bracket
① Chassis assy

② Push the three claws of the main chassis in the direction of the arrow and remove the H bracket upwards.

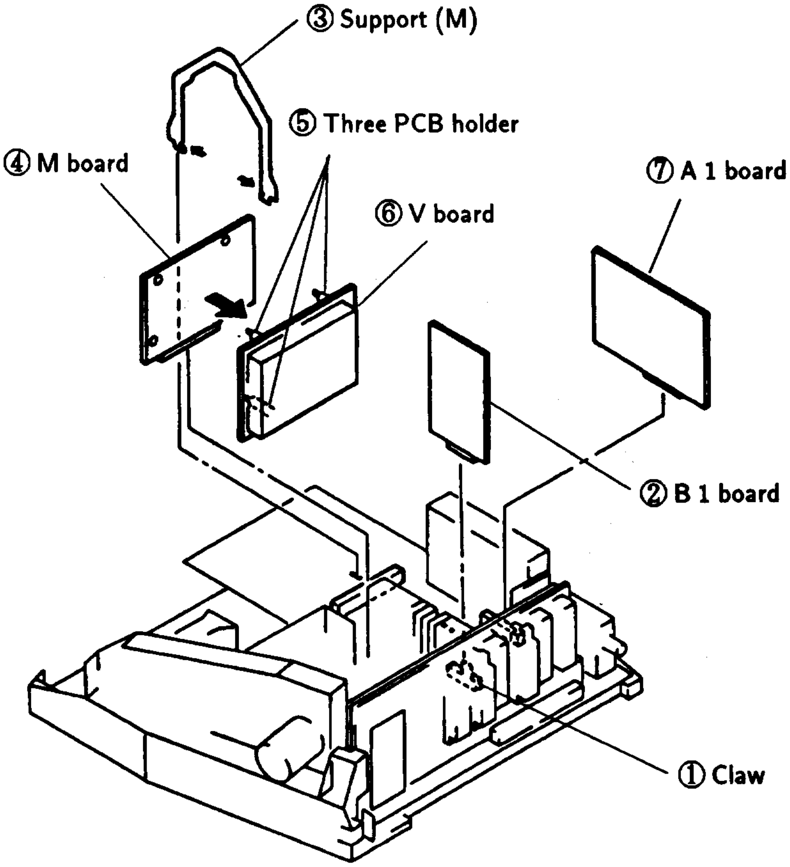
2-3. SERVICE POSITION

※ Remove the H bracket from the main chassis assy and then perform the following servicing.
(Refer to 2-2. CHASSIS ASSY REMOVAL)

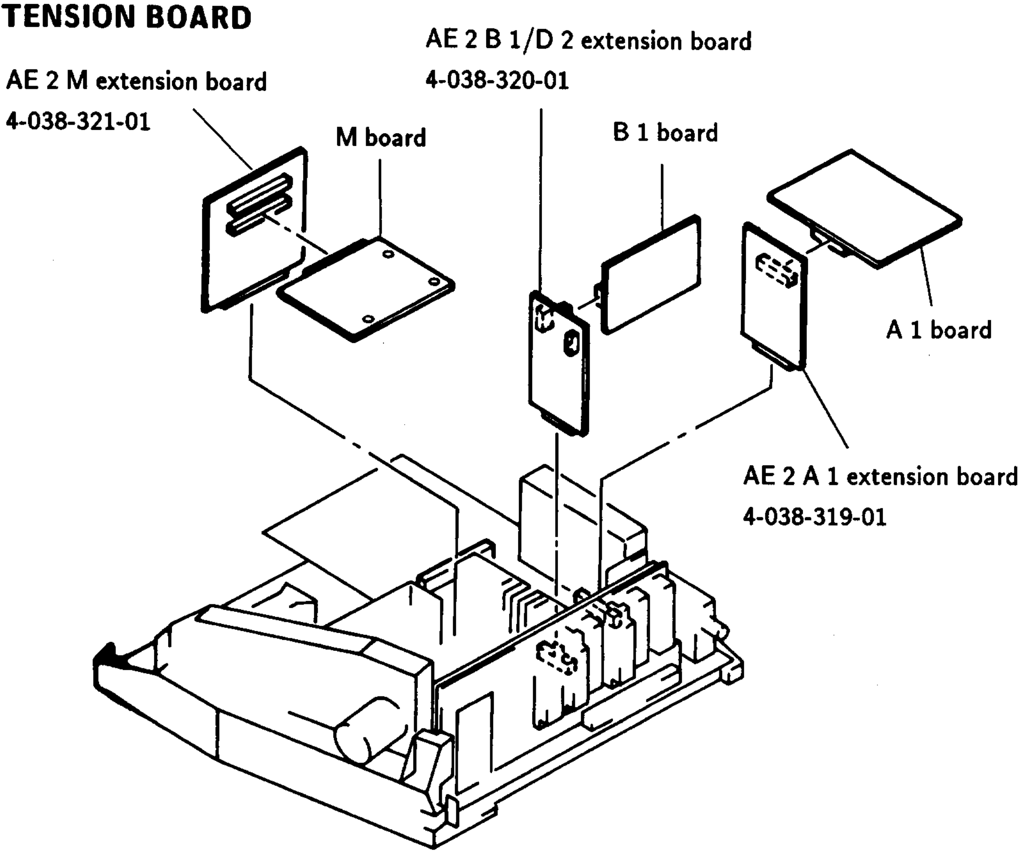




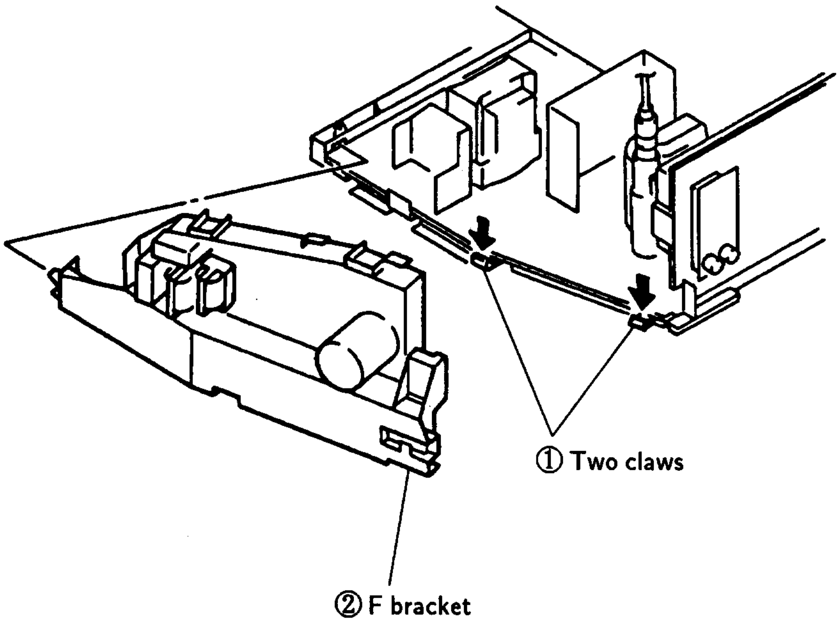
2-4. B 1, M, V AND A 1 BOARDS REMOVAL


③ Support (M)
⑤ Three PCB holder
④ M board
⑦ A 1 board
⑥ V board
② B 1 board
① Claw

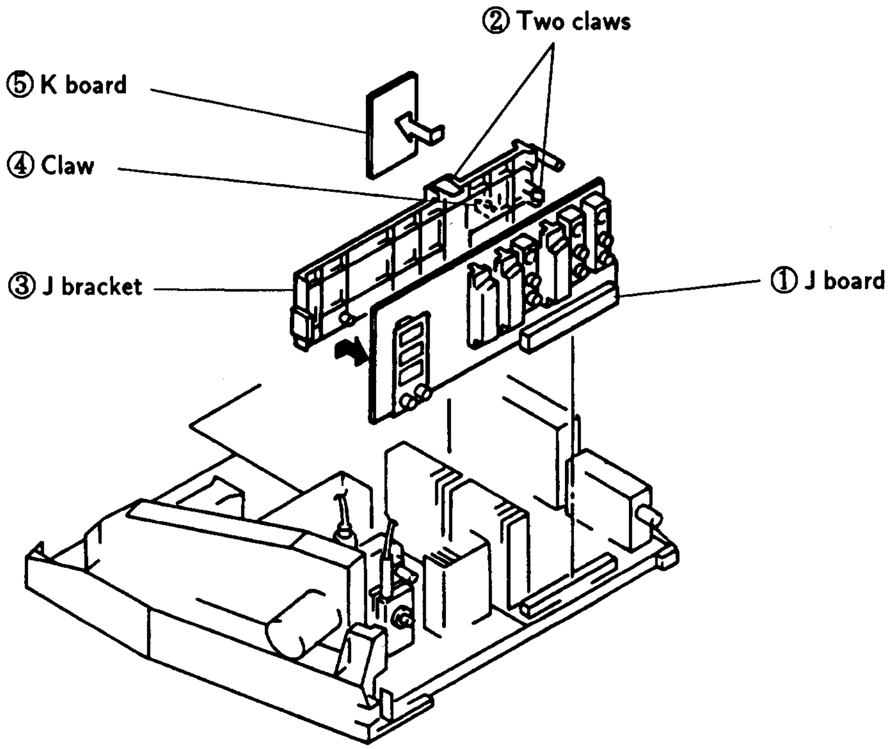
2-5. EXTENSION BOARD


AE 2 B 1/D 2 extension board
4-038-320-01
AE 2 M extension board
4-038-321-01
M board
B 1 board
A 1 board
AE 2 A 1 extension board
4-038-319-01

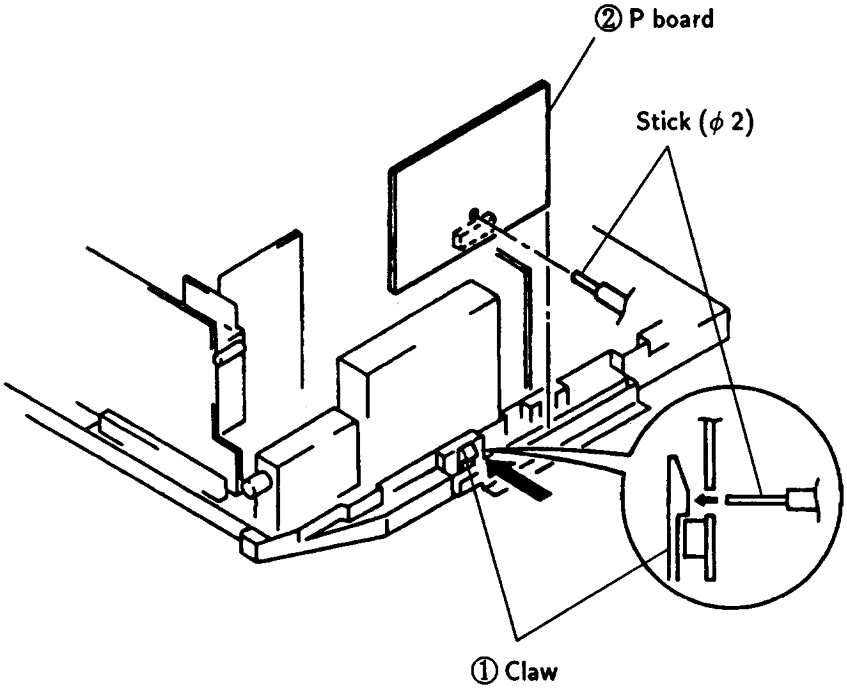
2-6. F BRACKET REMOVAL


① Two claws
② F bracket

2-7. J AND K BOARDS REMOVAL

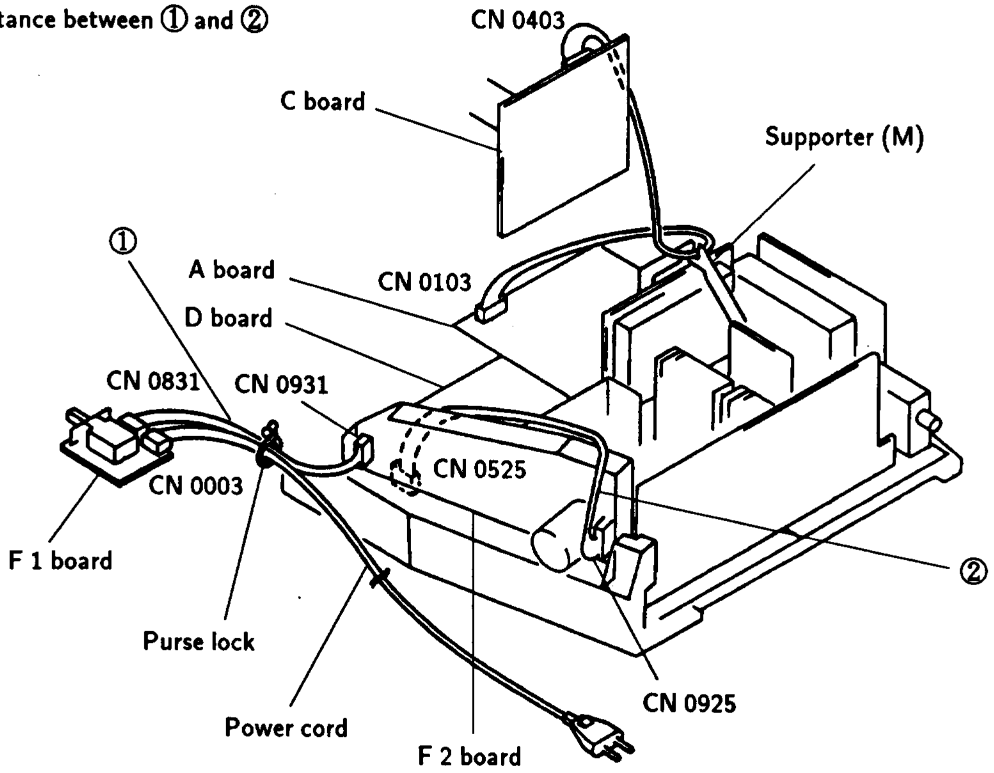

② Two claws
⑤ K board
④ Claw
③ J bracket
① J board

2-8. P BOARD REMOVAL

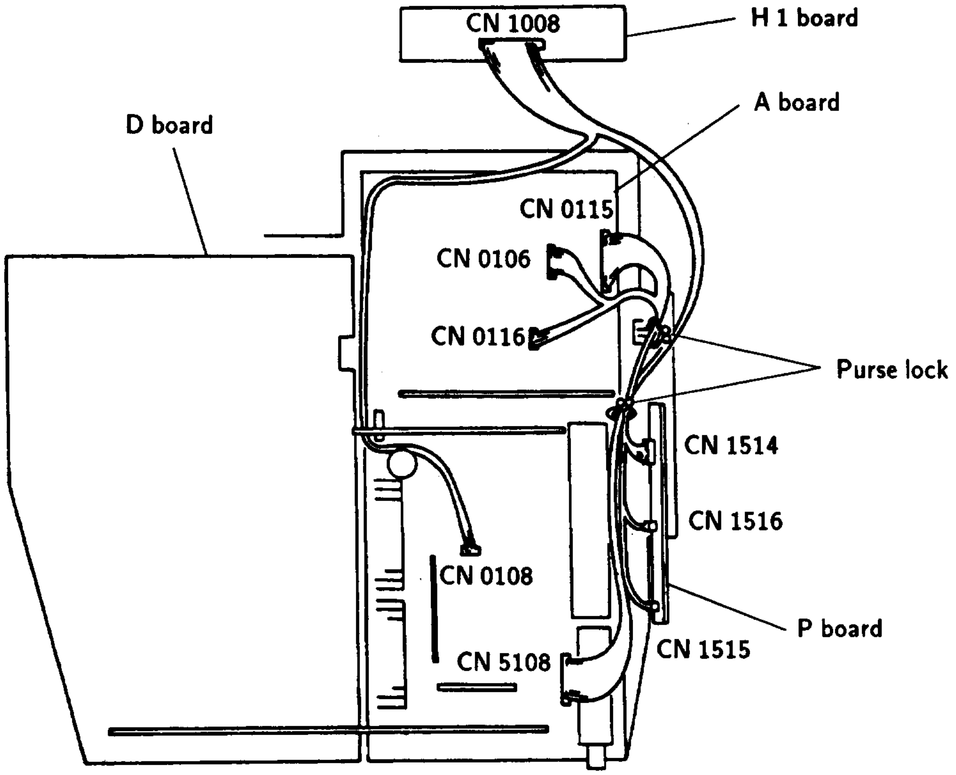

② P board
Stick (ϕ 2)
① Claw

2-9-1. WIRE ROD

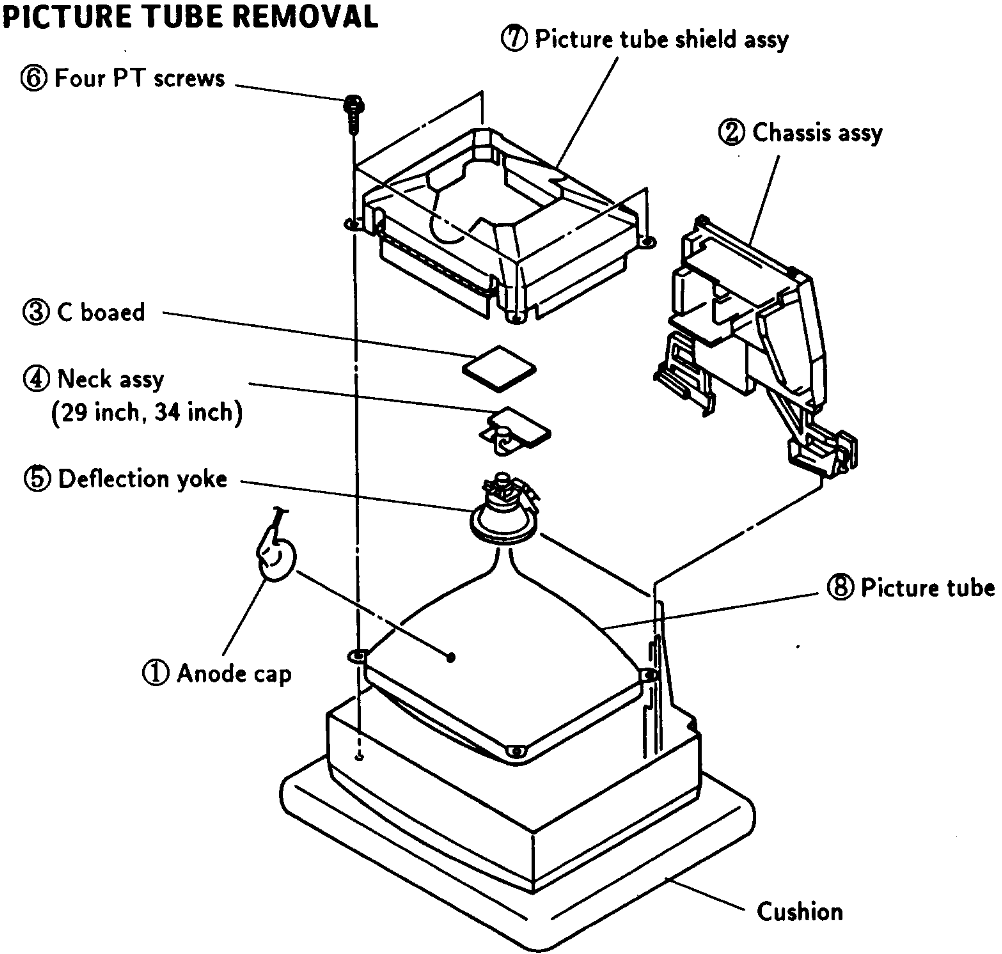
※ Keep distance between ① and ②


CN 0403
C board
Supporter (M)
①
A board
CN 0103
D board
CN 0831
CN 0931
CN 0525
CN 0003
F 1 board
②
Purse lock
CN 0925
Power cord
F 2 board

2-9-2. WIRE ROD


CN 1008
H 1 board
A board
D board
CN 0115
CN 0106
CN 0116
Purse lock
CN 1514
CN 1516
CN 0108
P board
CN 5108
CN 1515

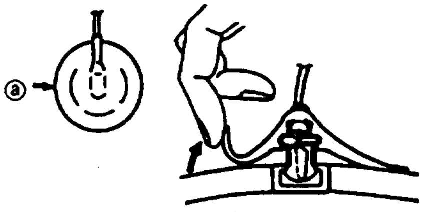
2-10. PICTURE TUBE REMOVAL


⑦ Picture tube shield assy
⑥ Four PT screws
② Chassis assy
③ C boaed
④ Neck assy
(29 inch, 34 inch)
⑤ Deflection yoke
⑧ Picture tube
① Anode cap
Cushion

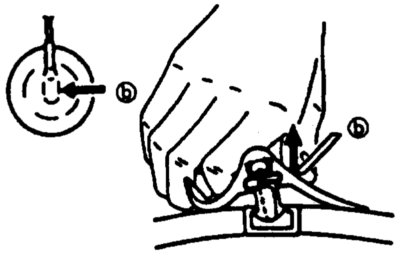
· REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT chield or carbon painted on the CRT, after removing the anode.

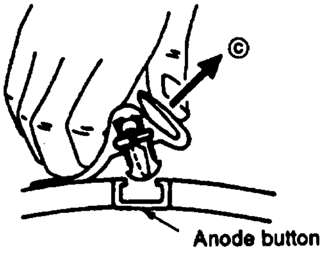
· REMOVING PROCEDURES



① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.



② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.


ⓒ
Anode button

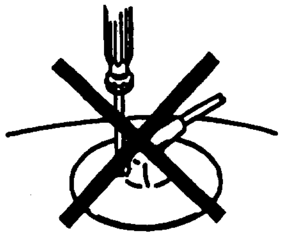
③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

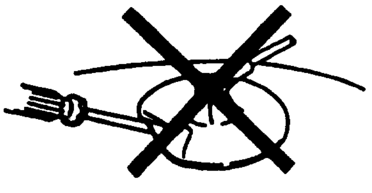
· HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

② Don't press the rubber hardly not to hurt inside of anode-caps!
A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly!
The shatter-hook terminal will stick out or hurt the rubber.





SECTION 3

SET-UP ADJUSTMENTS

- When complete readjustment is necessary or a new picture tube is installed, carry out the following adjustments.
- Unless there is specific instruction to the contrary, carry out these adjustments with the rated power supply.
- Unless there is specific instruction to the contrary, set the controls and switches this way :

◑ Contrast .... 80% (or remote control normal)
☼ Brightness 50%

- Carry out the following adjustments in this order :

1. Beam landing
2. Convergence
3. Focus
4. White balance

Note: Testing equipment required.

1. Color bar/pattern generator
2. Degausser
3. DC power supply
4. Digital multimeter
5. Oscilloscope

Preparations :

- In order to reduce the influence of geomagnetism on the set's picture tube face it east or west.
- Switch on the set's power and degauss with the degausser.

3-1. BEAM LANDING

1. Input the white signal with the pattern generator.
   Contrast } normal
   Brightness }
2. Position neck assy as shown in Fig.3-2.
3. Set the pattern generator raster signal to red.
4. Move the deflection yoke to the rear and adjust with the purity control so that the red is at the center and the blue and the green take up equally sized areas on each side. (See Fig.3-1 - 3-3)
5. Move the deflection yoke forward and adjust so that entire screen is red. (See Fig.3-1)
6. Switch the raster signal to blue, then to green and verify the condition.
7. When the position of the deflection yoke has been decided, fasten the deflection yoke with the screws.
8. If the beam does not land correctly in all the corners, use a magnet to adjust it. (See Fig.3-4)

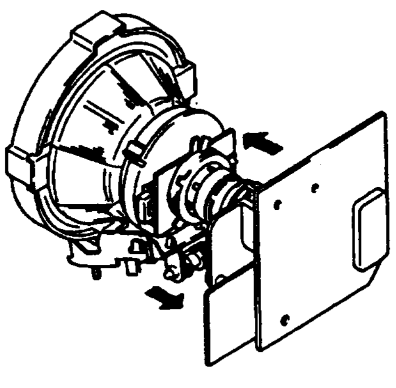


Fig.3-1

Fig.3-2

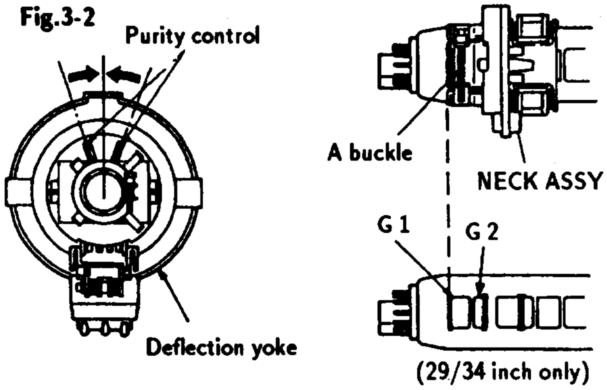
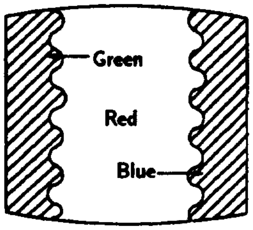

Purity control
A buckle
NECK ASSY
G 1
G 2
Deflection yoke
(29/34 inch only)

Fig.3-3


Green
Red
Blue

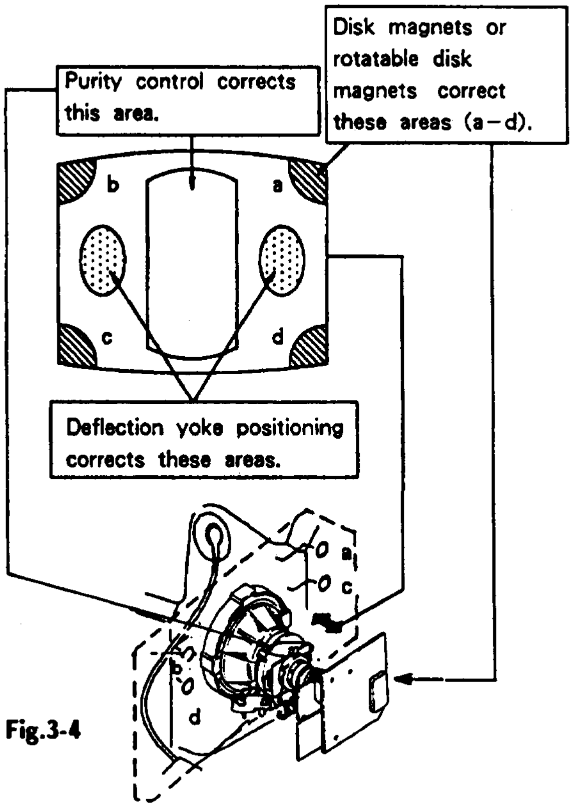

Purity control corrects this area.
Disk magnets or rotatable disk magnets correct these areas (a−d).
b
a
c
d
Deflection yoke positioning corrects these areas.
a
c
b
d

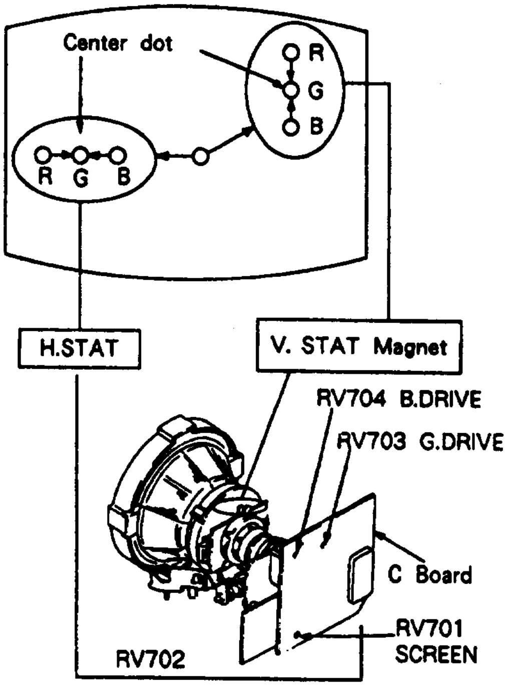
Fig.3-4

3-2. CONVERGENCE

Preparations :

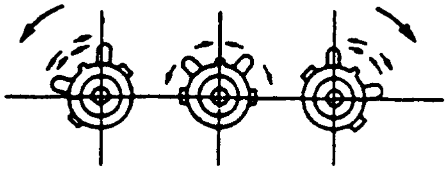
- Before starting this adjustment, adjust the focus, horizontal size, and vertical size.
- Minimize the brightness setting.
- Provide dot pattern.

(1) Horizontal and vertical static convergence



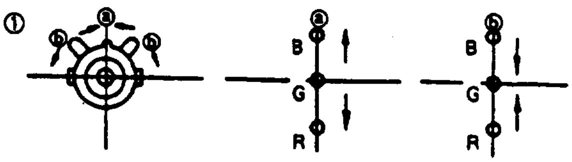
1. (Moving horizontally), adjust the H.STAT control so that the red, green, and blue points are on top of each other at the center of the screen.
2. (Moving vertically), adjust the V.STAT magnet so that the red, green, and blue points are on top of each other at the center of the screen.
3. If the H.STAT variable resistor cannot bring the red, green, and blue points together at the center of the screen, adjust the horizontal convergence with the H.STAT variable resistor and the V. STAT magnet in the manner given below.
(In this case, the H.STAT variable resistor and the V.STAT magnet influence each other)

- Tilt the V.STAT magnet and adjust the static convergence by opening or closing the V.STAT magnet.

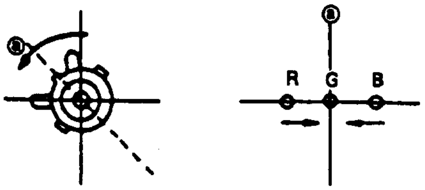


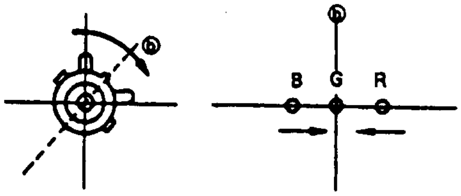
4. If the V.STAT magnet is moved in the direction of the ⓐ and ⓑ arrows, the red, green, and blue points move as shown below.

①

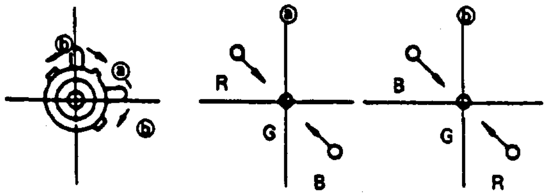


②

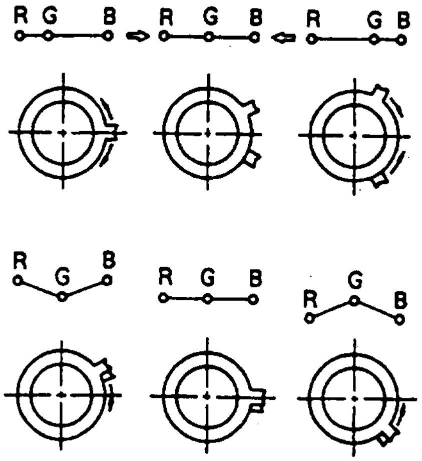


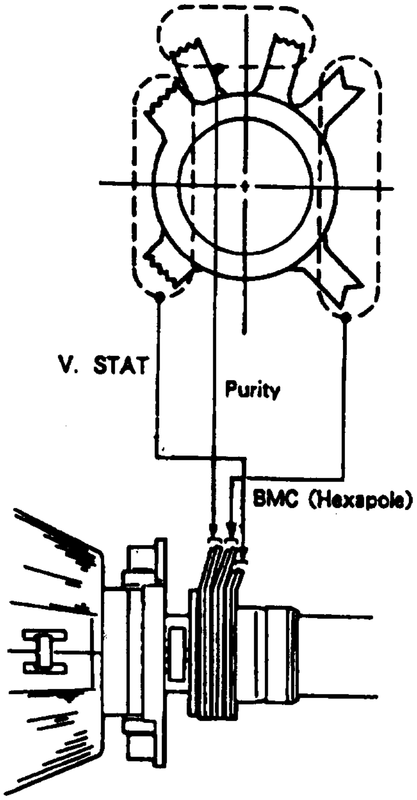


③



- Operation of BMC (Hexapole) Magnet


R G B
R G B
R G B
R G B
R G B
R G B


V. STAT
Purity
BMC (Hexapole)

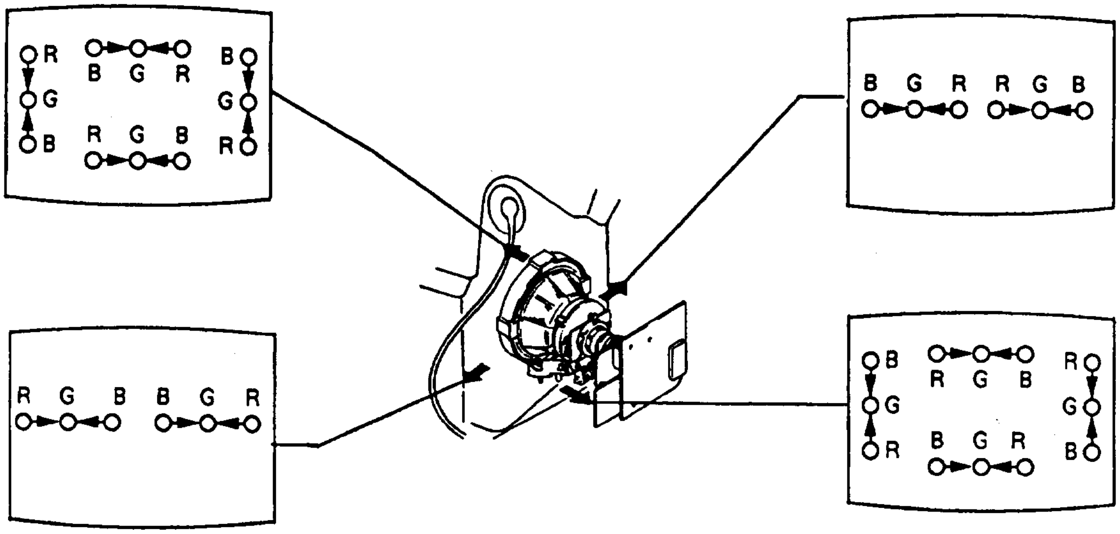
- The respective dot positions resulting from moving each magnet interact, so be sure to perform adjustment while tracking.
  Use the H.STAT VR to adjust the red, green, and blue dots so they coincide at the center of screen (by moving the dots in the horizontal direction).

(2)Dynamic convergence adjustment

Preparations :

- Before starting this adjustment, adjust the horizontal static convergence and the vertical static convergence.

1. Slightly loosen the deflection yoke screws.
2. Remove the deflection yoke spacer.
3. Move the deflection yoke as shown in the figure below and optimize the convergence.
4. Tighten the deflection yoke screws.
5. Install the deflection yoke spacer.

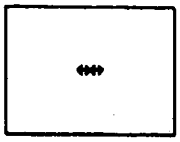

R G B B G R R G B B G R
B G R R G B
R G B B G R
B R R G B R G B G R B R G B G R

(3)Dynamic convergence adjustment
(34 inch only)

1. Adjust horizontal convergence located at the center position of the screen with H STAT VR.
2. Enter into service mode. (Refer to the section 2 "Electrical Adjustment" on how to enter service mode.)
3. Select CXA 1526 on menu.
4. Select each item and adjust them so that each item attains optimal convergence.
5. Press $\boxed{\text{OK}}$ button to write the data.

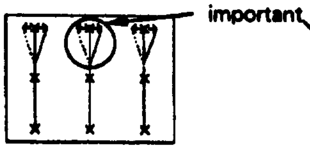
```
CXA 1526

1    DC SHIFT          (32)
2    UPPER Y BOW       (4)
3    LOWER Y BOW       (5)
4    H AMP             (48)
5    H TILT            (29)
6    UPPER COR BOW     (32)
7    UPPER TILT
8    LOWER COR BOW     (32)
9    LOWER TILT        (32)
```

R.G.B.dots movement on the screen of the set



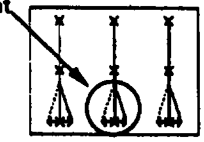
DC SHIFT

Fine adjustment of H STAT



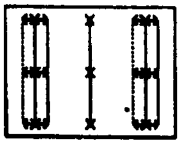
UPPER Y BOW

Adjustment of Y BOW of the upper section of the screen.



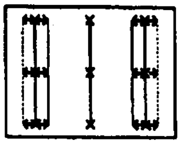
LOWER Y BOW

Adjustment of Y BOW of the lower section of the screen.



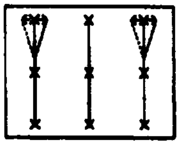
H AMP

H AMP adjustment



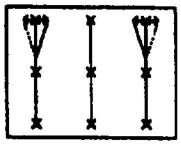
H TILT

H TILT adjustment



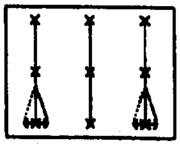
UPPER COR BOW

Adjustment of C BOW of the ower section of the screen.



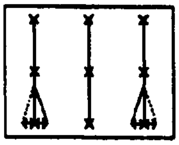
UPPER TILT

Adjustment of TILT of the lower section of the screen.



LOWER COR BOW

Adjustment of C BOW of the lower section of the screen.



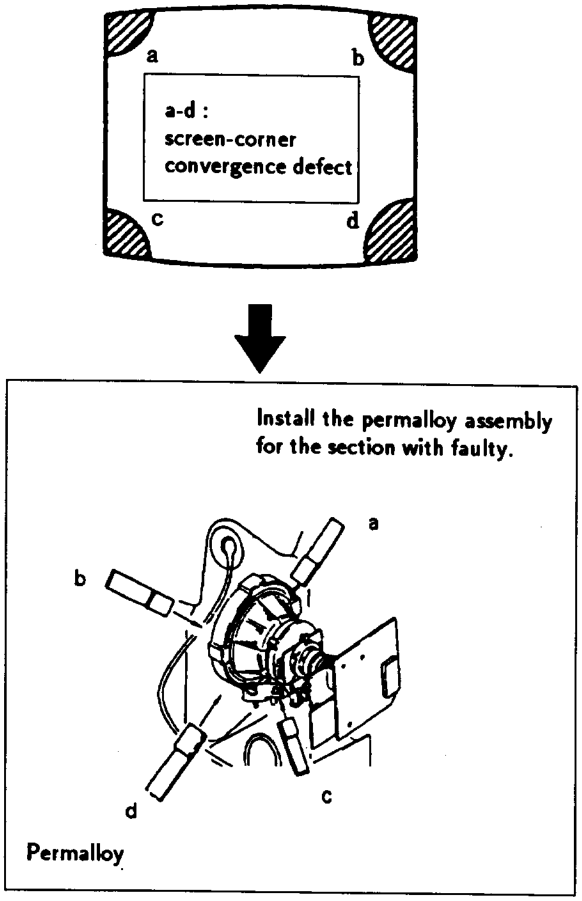
LOWER TILT

Adjustment of TILT of the lower section of the screen.

At this time, H.TILT, H.AMP, UPPER TILT, UPPER COR, BOW, LOWER TILT, and LOWER COR, BOW look like all the same, but the movement of the right and left dots are reverse in all the TILT system. (Pay attention to the dotted lines.)

(4) Screen corner convergence

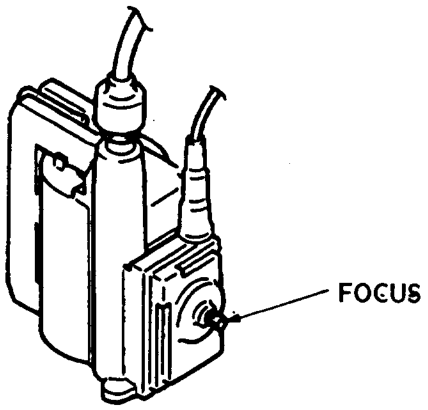
If you cannot adjust corner convergence properly, correct them with permalloy.



Install the permalloy assembly for the section with faulty.

3-3. FOCUS

Adjust the focus to optimize the screen.



3-4. WHITE BALANCE

Screen G2 Setting

1. Input the dot signal from the pattern generator.
2. Set the picture brightness control to its lowest level.
3. Apply 180V DC to the R,G, and B cathodes with an external power supply.
4. While watching the picture, adjust G 2 control RV 701 (Screen) to the point just before the return lines disappear.

White balance adjustment

1. Receive all-white signal.
2. Enter into service mode. (Refer to the section 4 "Electrical Adjustment" to how to enter service mode.)
3. Select CXA 1587 on menu.

09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.

4. Set picture to MAX.
5. Adjust G-DRIVE B-DRIVE with ▲, ▼ buttons so that the white balance becomes optimum.
6. Press OK button to write the data for each item.
7. Set picture to MIN.
8. Adjust G-AUTO CUT OFF, B-AUTO CUT OFF, R-MANUAL CUT OFF, G-MANUAL CUT OFF and B-MANUAL CUT OFF with ▲, ▼ buttons so that the white balance becomes optimum.
9. Press OK button to write the data for each item.

SECTION 4

CIRCUIT ADJUSTMENTS

4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied remote commander, RM-830 (for 25/29 inch) or RM-830 (for 34 inch)

HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power switch of the set while pressing any two buttons on the front panel.

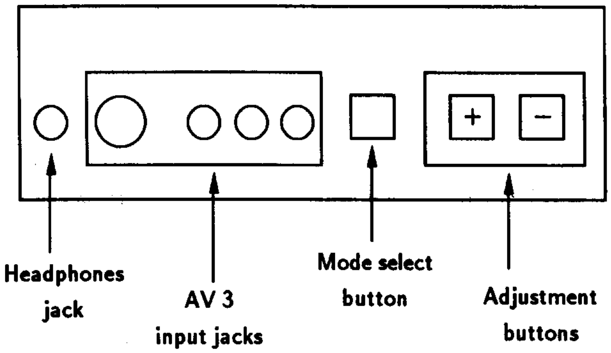


Fig.4-1

2. "TT" will appear on the upper right corner of the screen.

Command operation in service mode

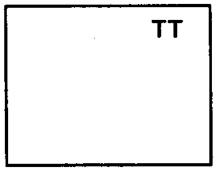


Fig.4-2

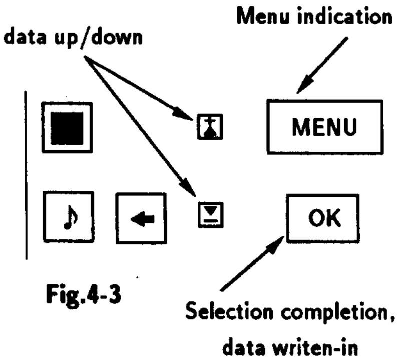
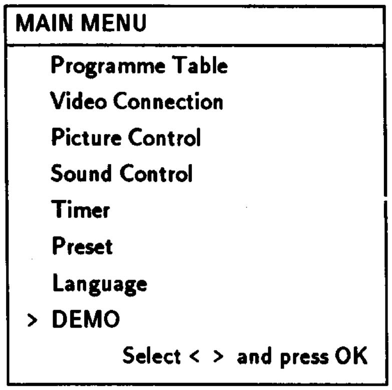

Item selection, data up/down
Menu indication
MENU
OK
Selection completion, data writen-in

Fig.4-3

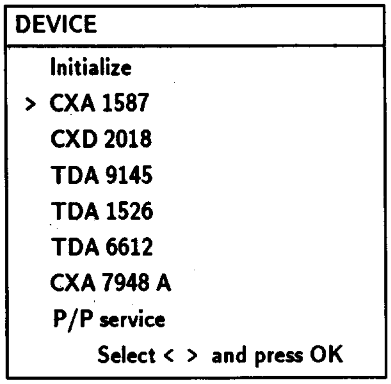
3. Press the MENU button of the commander to get the menu on screen.



MAIN MENU
Programme Table
Video Connection
Picture Control
Sound Control
Timer
Preset
Language
> DEMO
Select < > and press OK

Fig.4-4

4. Press the ▲ and ▼ buttons of the commander and move > to DEMO.
5. Press OK button to proceed to the next menu.
6. The menu of fig.4-5 will appear on screen. Select DEVICE corresponding to the adjustment item from the table on next page.



DEVICE
Initialize
> CXA 1587
CXD 2018
TDA 9145
TDA 1526
TDA 6612
CXA 7948 A
P/P service
Select < > and press OK

Fig.4-5

7. If adjustment item is CXA 1587, press the ▼ button and move > to CXA 1587.

CXA 1587 S

	Item No.	Adjustment item	Data Amout
	01	PICTURE	3
	02	COLOR	1
	03	BRIGHT	1
	04	HUE	1
	05	SHARPNESS	7
	06	RGB PICTURE	3
	07	SUB CONTRAST	ADJ.
	08	SUB COLOR	ADJ.
>	09	SUB BRIGHT	ADJ.
	10	SUB HUE	7
	11	VM LEVEL	2
	12	NR LEVEL	0
	13	ABL MODE	0
	14	G-DRIVE	ADJ.
	15	B-DRIVE	ADJ.

8. Press OK button to get the next selection menu.
9. Press ▼ button and move > to the adjustment item and press OK button.
10. Press the ▲ and ▼ buttons to change the data in order to comply each standard.
11. Press OK button to write data.
12. Turn off the power to quit service mode when completing the adjustment.

CXA 1587 S

01	PICTURE	53
02	COLOR	31
03	BRIGHT	31
04	HUE	31
05	SHARPNESS	7
06	RGB PICTURE	13
07	SUB CONTRAST	ADJ.
08	SUB COLOR	ADJ.
09	SUB BRIGHT	ADJ.
10	SUB HUE	7
11	VM LEVEL	2
12	NR LEVEL	0
13	ABL MODE	0
14	G-DRIVE	ADJ.
15	B-DRIVE	ADJ.
16	G-AUTO CUT OFF	ADJ.
17	B-AUTO CUT OFF	ADJ.
18	R-MANUAL CUT OFF	ADJ.
19	G-MANUAL CUT OFF	ADJ.
20	B-MANUAL CUT OFF	ADJ.
21	GAMMA LEVEL	0
22	DC TRANSFER RATIO	3
23	DINAMIC PICTURE	0
24	Y FILTER ADJ	ADJ.
25	Y DELAY TIME	15
26	Y DELAY SWITCH 1	0
27	Y DELAY SWITCH 2	1
28	SHARPNESS LIMIT	ON
29	ALL BLK	OFF
30	H SHIFT	32
31	DAC TEST	ON
32	PRE/OVER SHOOT	7
33	SHARPNESS FO	2
34	SUB SHARPNESS	3
35	R MUTE	OFF
36	G MUTE	OFF
37	B MUTE	OFF
38	AGING 1	OFF
39	AGING 2	OFF
40	AKB OFF	ON
41	INHIBIT RGB	OFF
42	FORCED RGB	OFF
43	V/2 V	OFF
44	AXIS	PAL
45	HUE SW	OFF
46	V EXTENTION	OFF
47	AFC 1	1
48	AFC 2	0
49	AFC OFF	ON
50	REF.POSITION	0

CXD 2018 Q

01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP.V	13
13	HV COMP.H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAM	OFF
19	INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	ADJ.

Typical Value (OSD based)when receiving PAL Philips pattern.

CXA 1526		ADJ.
1	DC SHIFT	(32)
2	UPPER Y BOW	(4)
3	LOWER Y BOW	(5)
4	H.AMP	(48)
5	H TILT	(29)
6	UPPER COR BOW	(32)
7	UPPER TILT	(32)
8	LOWER COR BOW	(32)
9	LOWER TILT	(32)

34 inch only

TDA 6612	ADJ.
Stereo-Separation	(30)

Should be adjusted twice 4 : 3 and 16 : 9 mode.

Y FILTER ADJUSTMENT

1. Input PAL RED pattern.
2. Connect an oscilloscope to CN 0403 ① pin (R OUT) on the C board.
3. Enter into service mode and press 3, 8.
4. Adjust data by △ or ▽ to minimize the chroma element of CN 0403 ① pin.

SUB BRIGHTNESS ADJUSTMENT

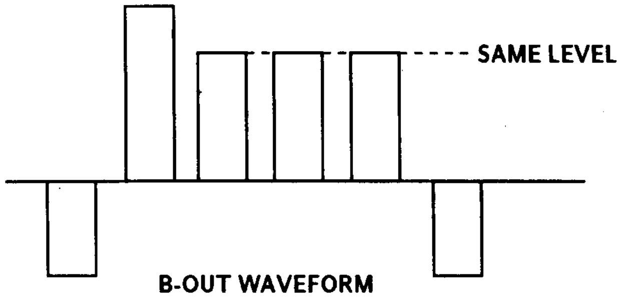
1. Input Phillips pattern.
2. Enter into service mode and press 23.
3. Adjust data so that 0-IRE of the grey scale and CUT -OFF 20-IRE glitter slightly.

SUB CONTRAST ADJUSTMENT

1. Input a video that contains small 100% area on the Black Back ground.
2. Enter into service mode and press 01 to have PIC max followed by 21.
3. Adjust data so that 2.5 Vp-p can be obtained at ① CN 0403 (R out).

SUB COLOR ADJUSTMENT

1. Input PAL color bar.
2. Connect an oscilloscope to CN 0403 ③ pin (B OUT) on the C board.
3. Enter into service mode and press 22 of CXA 1587, 8 SUB COLOR.
4. Adjust data so that the right sides of the waveform will be the same.



B-OUT WAVEFORM

STEREO-SEPARATION ADJUSTMENT

1. Input 1 kHz stereo signal to the L-ch and 400 Hz stereo signal to the R-ch.
2. Enter into service mode and press 19.
3. Adjust data so that sound does not leak to the R-ch and the L-ch.

DRIVE AND CUT OFF

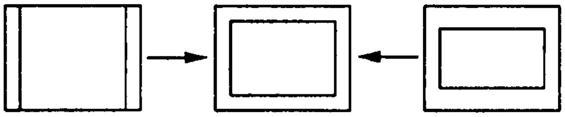
See direct test mode list attached and refer to sub brightness or such for adjustment method.

DEFLECTION SYSTEM ADJUSTMENT

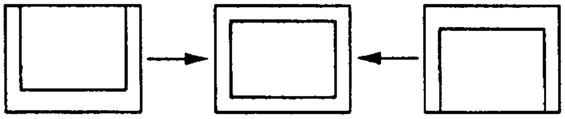
1. Enter into service mode and select CXD 2018.
2. Select and adjust each item in order to get an optimum image.

01	V SIZE	ADJ.
02	V SHIFT	ADJ.
03	S CORRECTION	ADJ.
04	V LINEARITY	ADJ.
05	H SIZE	ADJ.
06	PIN AMP	ADJ.
07	TILT	ADJ.
08	UPPER CORNER	ADJ.
09	LOWER CORNER	ADJ.
10	V BOW	ADJ.
11	ANGLE	ADJ.
12	HV COMP.V	13
13	HV COMP.H	8
14	FRAME SHIFT	OFF
15	FREE RUN 60 Hz	OFF
16	SYSTEM 60 Hz	OFF
17	ASPECT WIDE	OFF
18	DOUBLE SCAM	OFF
19	NON INTERLACE	ON
20	H SHIFT	32
21	N/S CORRECTION	ADJ.

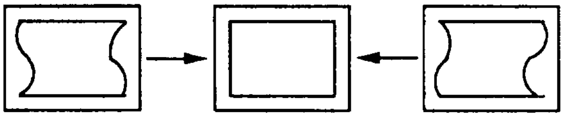
V SIZE



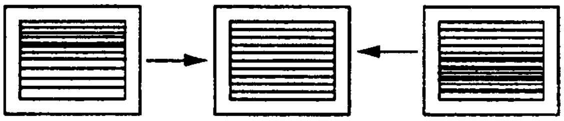
V SHIFT



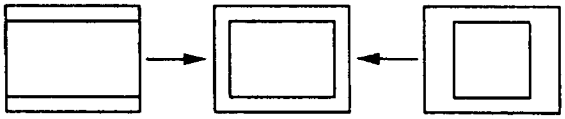
S CORRECTION



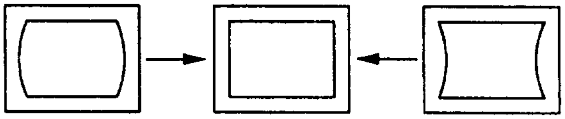
V LINEARITY



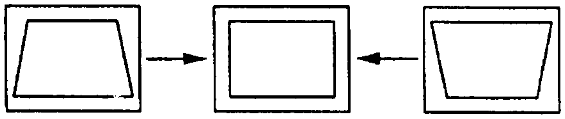
H SIZE



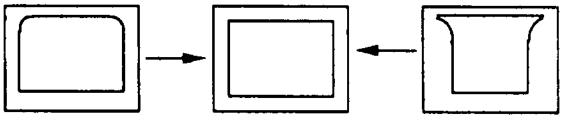
PIN AMP



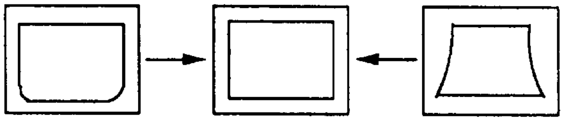
TILT



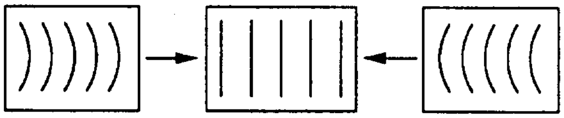
UPPER CORNER PIN



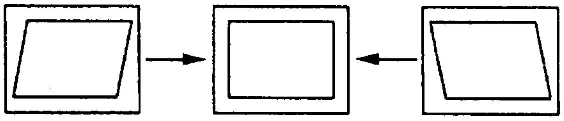
LOWER CORNER PIN



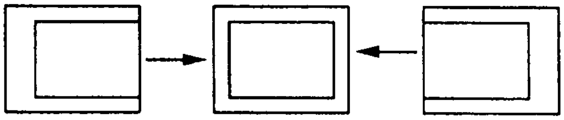
V BOW



ANGLE



H SHIFT



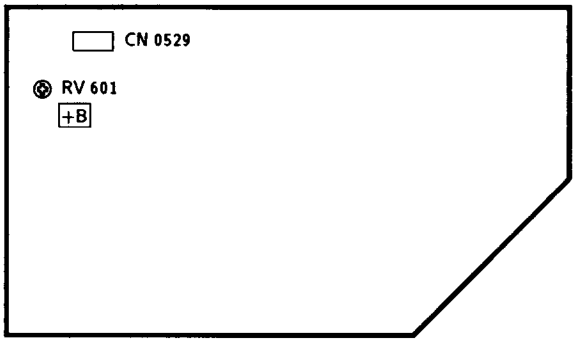
3. Press OK button to write the data.

If menu display may disturb the adjustment press ⊠ to clear, to resume it, press ⊠ again.

4-2. VOLUME ELECTRICAL ADJUSTMENTS

+B (+135 V) ADJUSTMENT (RV 601)

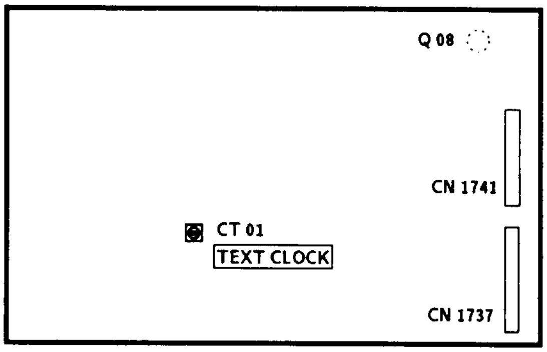
D BOARD



1. Turn on the power of the TV set.
2. Connect a digital multi-meter to ① pin of CN 0529 on D board.
3. Adjust RV 601 on D board to +135 V.

TEXT CLOCK ADJUSTMENT (CT 01)

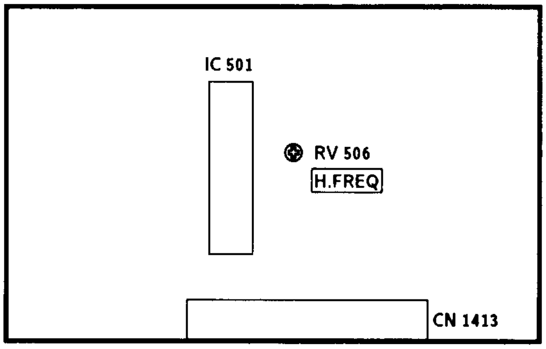
V BOARD



1. Get TEXT MENU on screen.
2. Connect GND and the base of Q 08 on V board.
3. Adjust CT 01 on V board so that the MENU stands still as much as possible.

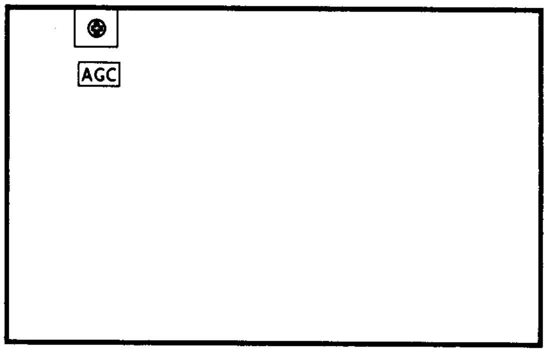
H.FREQ ADJUSTMENT (RV 506)

M BOARD



1. Connect GND to ⑫ pin of IC 501 on M board.
2. Connect a frequency counter to ④ pin of IC 501.
3. Adjust RV 506 on M board to 15,625+100 Hz.
4. Remove ⑫ pin of IC 501 from GND.

AGC ADJUSTMENT (IF BLOCK)



1. Receive off-air signal.
2. Adjust AGC VR so that there is no snow noise and cross-modulation.
3. Change receiving channel and confirm status.

4-3. TEST MODE 2 :

Is available by pressing Test button two times, OSD "TT"appears. The functions described bellow are available by pressing the two numbors. To release the Test Mode 2, press two times 0, or switch TV in Standby Mode.

00	switch Test Mode 2 off
01	picture maximum
02	picture minimum
03	Volume 35%
04	Volume 50%
05	Volume 65%
06	Volume 80%
07	Aging Condition (Volumin., Picture max., Brightness max., Aging 2 Mode of CXA 1587, TDA 2595 is locked to CXA 1587 via PIN 34 of μ-Con.)
08	Shipping Condition (Analog Values are RESET due to factory setting, Prog 1 is selected, TT Mode is switched off)
09	dummy
10	Tenth entry is deleted
11	Balance
12	Hue
13-14	dummy
15	Read factory setting from NVM Reads Volume, Balance, Treble, Bass, Brightness, Contrast, Hue, Sharpness, Colour values from ROM to the actual used values (Last Power Memory)
16	Save actual used values as RESET values Memorize actual used values Balance, Treble, Bass, Hue, Sharpness at RESET position in NVM
17	Preset Lavel for AV Sources
18	dummy
19	Stereo Seperation
20	Tenth entry is deleted
21	Sub Contrast
22	Sub Colour
23	Sub Brightness
24-29	dummy

30	Tenth entry is deleted
31	Green Drive
32	Blue Drive
33	Green Cut Off (Auto Cut Off)
34	Blue Cut Off (Auto Cut Off)
35	Red Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
36	Green Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
37	Blue Cut Off (Manual Cut Off) (Auto Cut Off is switched off)
38	Y-Filter adjustment (Trap is switched off and TDA 9145 is switched in forced NTSC Mode)
39	dummy
40	Tenth entry is deleted
41	Default setting of CXA 1587 (Only in Plog 99 available)
42	Default setting of CXA 2018 (Only in Plog 99 available)
43	Default setting of CXA 1526 (Only in Plog 99 available)
44	(all Port High) Not yet
45	(all Port High) Not yet
46-48	dummy
49	Erease the NVM Testbyte (this byte detects already stored NMV's) After selecting this function, switch TV Off and On → the NVM will be preset by μ-Controller. (Not the channel data)

Note : For No. 35, 36, 37 and 38 special pressing (AKB, forced Color Mode, Trap) is selected. After selecting a new Test Mode Number, the AKB is switched ON, the Trap is switched On and TDA 9145 is switched to Auto Search Mode.

In Test Mode 2 the Menu display is switchable by Speaker-Off button.

4-4. ERROR MESSAGE

Self diagnos system can operates as follows.

- When MP can't get the acknowledge back from the device, LED starts flashing according to the table as attached.

In case of more errors in parallel, the blinking error shows max. Priority according to the error number (e.g. error 2 and error 5 appears together, then LEDs shows error 2) .

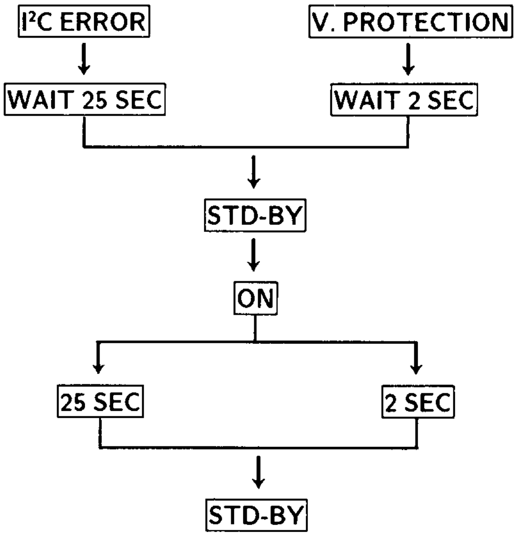


TABLE OF ERRORS

ERROR COUNT	IC TYPE	FUNCTION
1	Ⅱ C BUS	SDA low
2	X 24 C 16	EEPROM
3	SDA 3202	Tuner Pll
4	TDA 9145	Colour decoder
5	CXA 1587	RGB/Jungle
6	TDA 6612	Sound processor
7	CXD 2018	V deflection
8	CXA 1545	AV switch
11	SDA 5248	Text
13		V protection

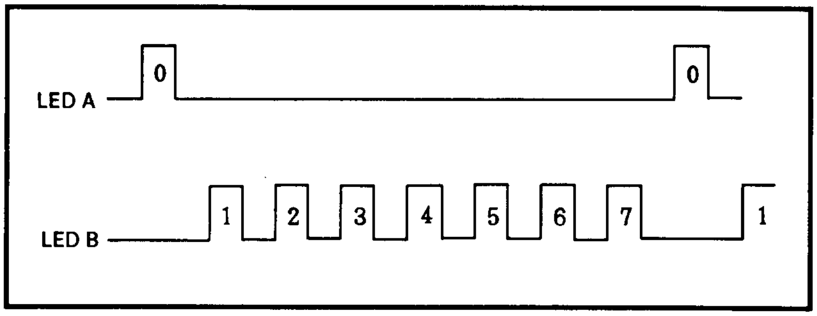
Stand by LED blinking

No IK return

4-5. ERROR Ⅱ C BUS DIAGNOSIS SYSTEM IN AE 2 CHASSIS AVAILABLE

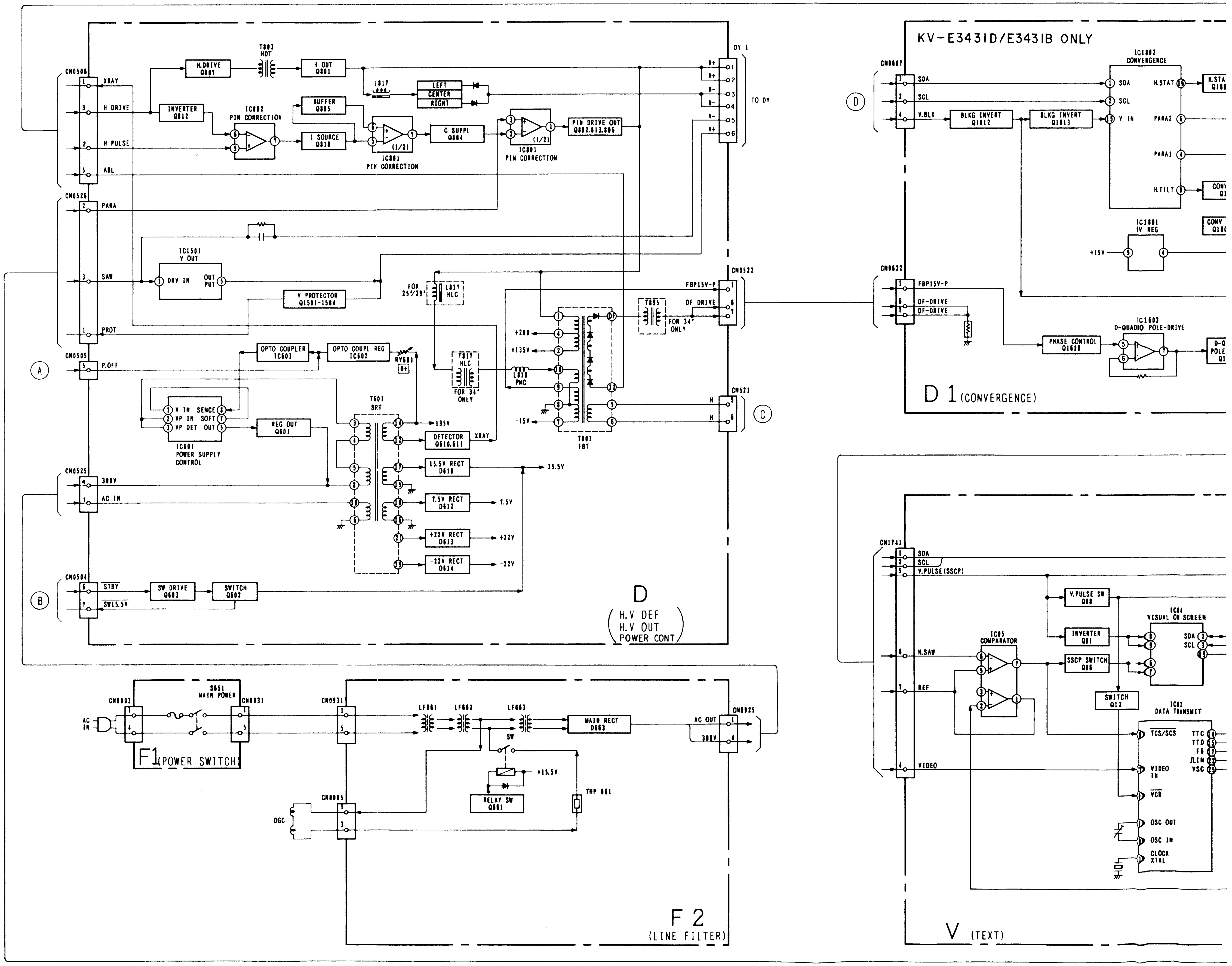
For all ICs in AE 2 chassis which are necessary to get picture and sound there is a built in error I²C Bus diagnosis system.

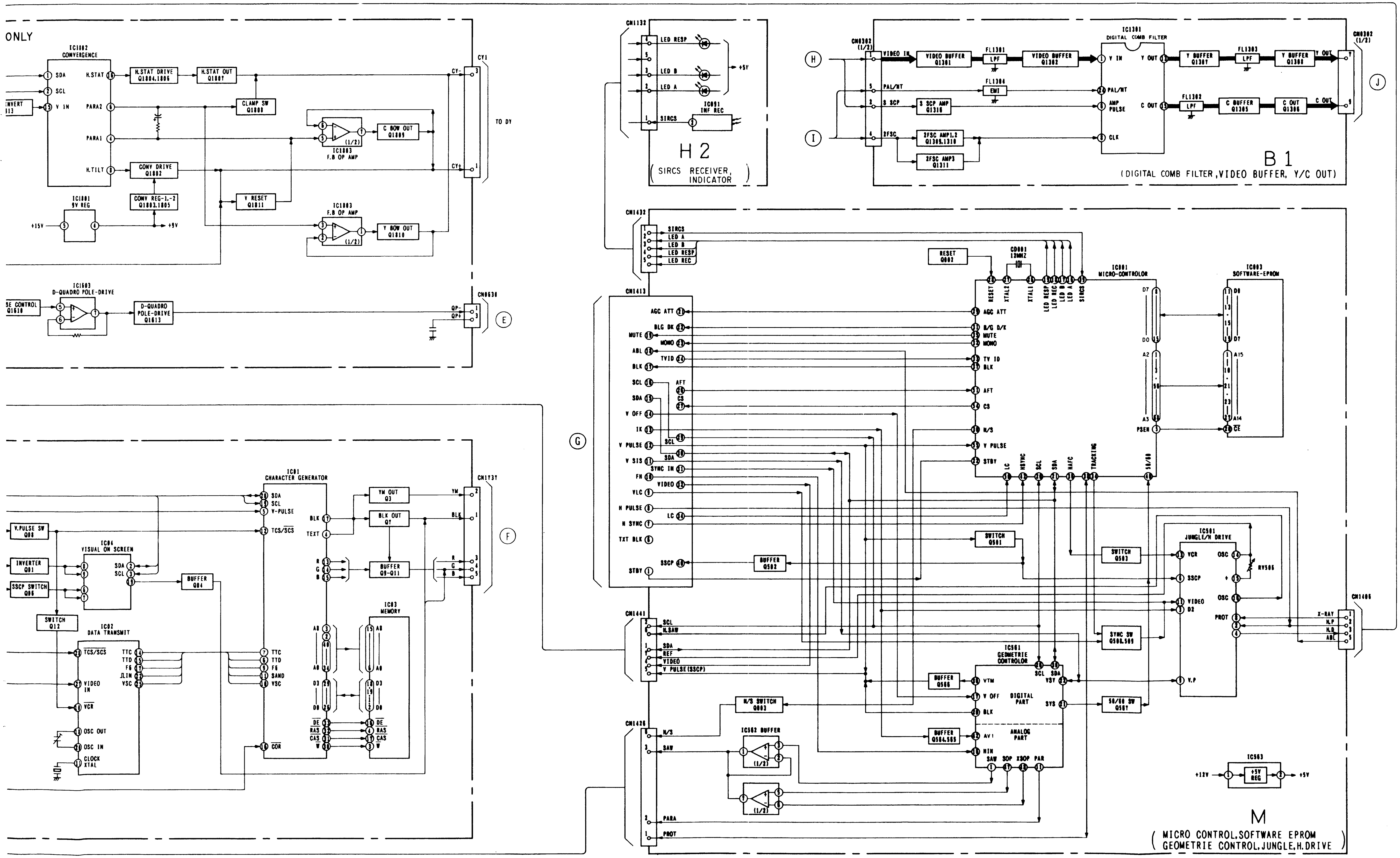
In case of no acknowledge bit, LED A and LED B starts blinking as shown.



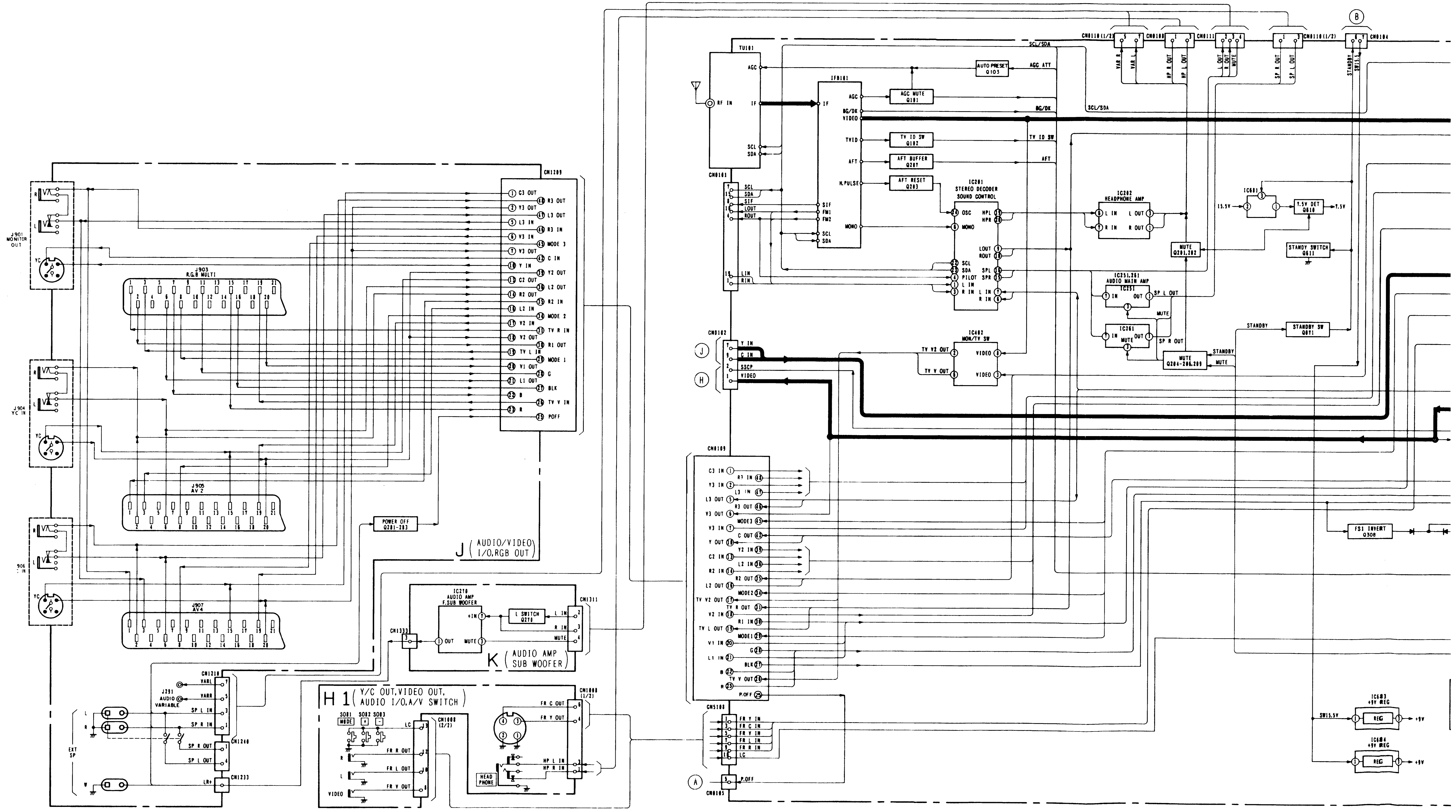
SECTION 5
DIAGRAMS

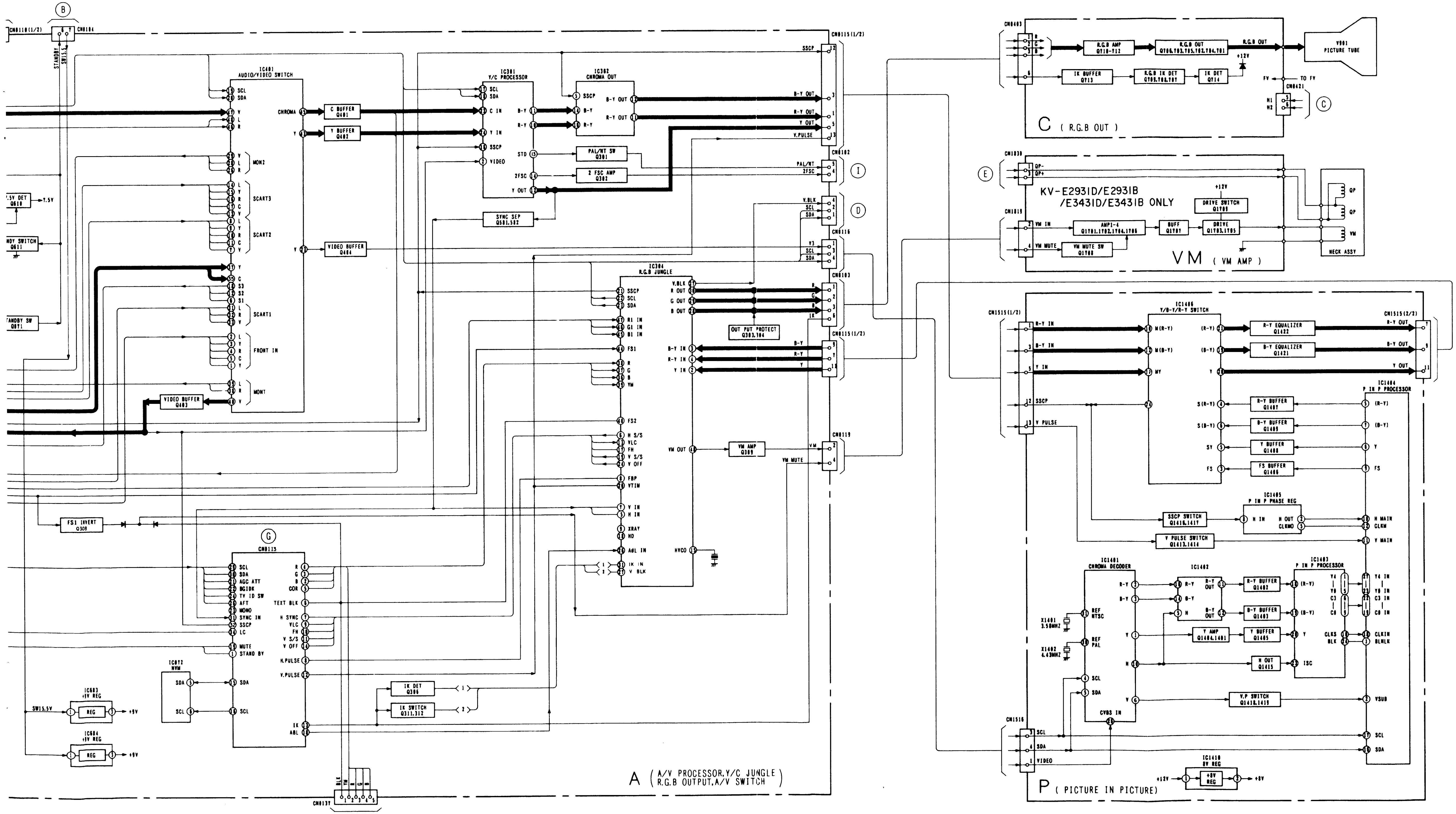
5-1. BLOCK DIAGRAMS (1)


CN0506
XRAY
H DRIVE
H PULSE
ABL
CN0526
PARA
SAW
PROT
CN0505
P.OFF
A
CN0525
300V
AC IN
CN0504
STBY
SW15.5V
B
H.DRIVE Q807
T803 HDT
H OUT Q801
L817
LEFT
CENTER
RIGHT
INVERTER Q812
IC802 PIN CORRECTION
BUFFER Q805
I SOURCE Q818
(1/2)
IC801 PIN CORRECTION
C SUPPL Q804
(1/2)
IC801 PIN CORRECTION
PIN DRIVE OUT Q802,813,806
DY 1
H+
H+
H-
H-
V-
V+
TO DY
IC1501 V OUT
DRV IN
OUT PUT
V PROTECTOR Q1501-1504
FOR 25"/29"
L817 HLC
T817 HLC
FOR 34" ONLY
L810 PMC
+200
+135V
-15V
T801 FBT
T805
DF DRIVE
FOR 34" ONLY
CN0522
FBP15V-P
CN521
H
H
C
OPTO COUPLER IC603
OPTO COUPL REG IC602
RV601
B+
V IN
VP IN
VP DET
SENCE
SOFT
OUT
IC601 POWER SUPPLY CONTROL
REG OUT Q601
T601 SPT
135V
DETECTOR Q610,611
XRAY
15.5V RECT D610
15.5V
7.5V RECT D612
7.5V
+22V RECT D613
+22V
-22V RECT D614
-22V
SW DRIVE Q603
SWITCH Q602
D
H.V DEF
H.V OUT
POWER CONT
CN0003
AC IN
S651 MAIN POWER
CN0831
F1 (POWER SWITCH)
CN0931
LF661
LF662
LF663
MAIN RECT D663
AC OUT
300V
CN0925
SW
+15.5V
RELAY SW Q661
THP 661
CN0005
DGC
F 2
(LINE FILTER)
KV-E3431D/E3431B ONLY
CN0607
D
SDA
SCL
V.BLK
BLKG INVERT Q1812
BLKG INVERT Q1813
IC1802 CONVERGENCE
SDA
SCL
V IN
H.STAT
PARA2
PARA1
H.TILT
H.STA
CONV
CONV
IC1801 9V REG
+15V
CN0622
FBP15V-P
DF-DRIVE
DF-DRIVE
PHASE CONTROL Q1610
IC1603 D-QUADRO POLE-DRIVE
D-Q POLE
D 1 (CONVERGENCE)
CN1741
SDA
SCL
V.PULSE (SSCP)
H.SAW
REF
VIDEO
IC05 COMPARATOR
V.PULSE SW Q08
INVERTER Q01
SSCP SWITCH Q06
IC04 VISUAL ON SCREEN
SDA
SCL
SWITCH Q12
IC02 DATA TRANSMIT
TCS/SCS
VIDEO IN
VCR
OSC OUT
OSC IN
CLOCK XTAL
TTC
TTD
F6
ЛLIN
VSC
V (TEXT)

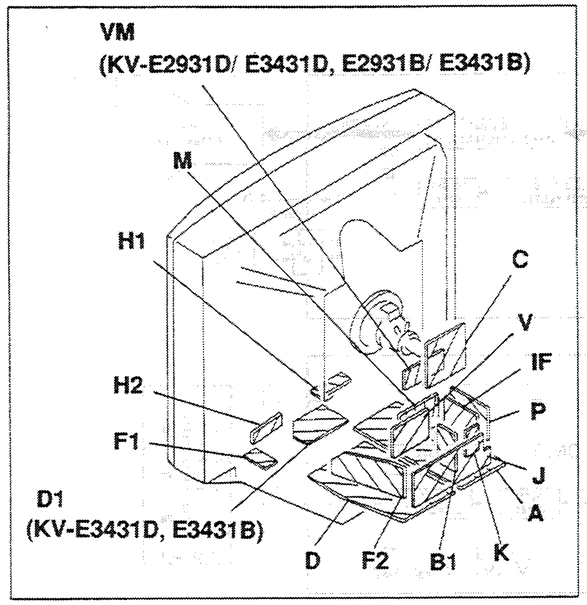

ONLY
IC1802 CONVERGENCE
SDA
SCL
V IN
H.STAT
PARA2
PARA1
H.TILT
INVERT
H.STAT DRIVE Q1804,1806
H.STAT OUT Q1807
CLAMP SW Q1808
CONV DRIVE Q1802
CONV REG-1,-2 Q1803,1805
V RESET Q1811
IC1801 9V REG
+15V
+9V
IC1803 F.B OP AMP
(1/2)
C BOW OUT Q1809
Y BOW OUT Q1810
CY1
CY-
CY+
TO DY
IC1603 D-QUADRO POLE-DRIVE
SE CONTROL Q1610
D-QUADRO POLE-DRIVE Q1613
CN0630
QP-
QP+
E
CN1132
LED RESP
LED B
LED A
SIRCS
+5V
IC091 INF REC
H 2
(SIRCS RECEIVER, INDICATOR)
H
I
CN0302 (1/2)
VIDEO IN
PAL/NT
S SCP
2FSC
VIDEO BUFFER Q1301
FL1301 LPF
VIDEO BUFFER Q1302
FL1304 EMI
S SCP AMP Q1316
2FSC AMP1,2 Q1309,1310
2FSC AMP3 Q1311
IC1301 DIGITAL COMB FILTER
V IN
PAL/NT
AMP PULSE
CLK
Y OUT
C OUT
Y BUFFER Q1307
FL1303 LPF
Y BUFFER Q1308
FL1302 LPF
C BUFFER Q1305
C OUT Q1306
J
B 1
(DIGITAL COMB FILTER, VIDEO BUFFER, Y/C OUT)
CN1432
SIRCS
LED A
LED B
LED RESP
LED REC
CN1413
AGC ATT
BLG DK
MUTE
MONO
ABL
TVID
BLK
SCL
SDA
AFT
CS
V OFF
IK
V PULSE
V SIS
SYNC IN
FH
VIDEO
VLC
H PULSE
LC
H SYNC
TXT BLK
SSCP
STBY
G
RESET Q002
CD001 12MHZ
IC001 MICRO-CONTROLOR
RESET
XTAL2
XTAL1
LED RESP
LED REC
LED B
LED A
SIRCS
AGC ATT
B/G D/K
MUTE
MONO
TV ID
BLK
AFT
CS
N/S
V PULSE
STBY
LC
HSYNC
SCL
SDA
HAFC
TRACKING
50/60
D7
D0
A2
A3
PSEN
IC003 SOFTWARE-EPROM
D0
D7
A15
A14
CE
SWITCH Q501
BUFFER Q502
SWITCH Q503
IC501 JUNGLE/H DRIVE
VCR
SSCP
VIDEO
D2
V.P
OSC
+
PROT
RV506
SYNC SW Q508,509
CN1406
X-RAY
H.P
H.B
ABL
CN1441
SCL
H.SAW
SDA
REF
VIDEO
V PULSE(SSCP)
IC561 GEOMETRIE CONTROLOR
SCL
SDA
VTM
V OFF
BLK
VSY
SYS
DIGITAL PART
ANALOG PART
AV1
HIN
SAW
SOP
XSOP
PAR
BUFFER Q566
BUFFER Q564,565
50/60 SW Q567
N/S SWITCH Q003
CN1426
N/S
SAW
PARA
PROT
IC562 BUFFER
(1/2)
IC563
+12V
+5V REG
+5V
M
(MICRO CONTROL, SOFTWARE EPROM GEOMETRIE CONTROL, JUNGLE, H.DRIVE)
IC01 CHARACTER GENERATOR
SDA
SCL
V-PULSE
TCS/SCS
BLK
TEXT
R
G
B
TTC
TTD
F6
SAND
VSC
COR
A8
A0
D3
D0
DE
RAS
CAS
W
YM OUT Q3
BLK OUT Q7
BUFFER Q9-Q11
IC03 MEMORY
CN1737
YM
BLK
F
V.PULSE SW Q08
INVERTER Q01
SSCP SWITCH Q06
IC04 VISUAL ON SCREEN
BUFFER Q04
SWITCH Q12
IC02 DATA TRANSMIT
TCS/SCS
VIDEO IN
VCR
OSC OUT
OSC IN
CLOCK XTAL
TTC
TTD
F6
⎍IN
VSC

5-2. BLOCK DIAGRAMS (2)


J901 MONITOR OUT
J903 R.G.B MULTI
J904 YC IN
J905 AV 2
J906 IN
J907 AV4
CN1209
POWER OFF Q201-203
J (AUDIO/VIDEO I/O,RGB OUT)
IC210 AUDIO AMP F.SUB WOOFER
L SWITCH Q210
CN1311
CN1333
K (AUDIO AMP SUB WOOFER)
CN1210
J201 AUDIO VARIABLE
VARL
VARR
SP L IN
SP R IN
SP R OUT
SP L OUT
CN1240
CN1233
EXT SP
H 1 (Y/C OUT,VIDEO OUT, AUDIO I/O,A/V SWITCH)
S001 MODE
S002 +
S003 −
CN1000 (2/2)
CN1000 (1/2)
FR C OUT
FR Y OUT
HP L IN
HP R IN
HEAD PHONE
FR R OUT
FR L OUT
FR V OUT
VIDEO
TU101
AGC
IF
RF IN
SCL
SDA
CN0101
IF0101
BG/DK
VIDEO
TVID
AFT
H.PULSE
MONO
SIF
FM1
FM2
AGC MUTE Q101
TV ID SW Q102
AFT BUFFER Q207
AFT RESET Q203
AUTO PRESET Q103
AGC ATT
SCL/SDA
TV ID SW
IC201 STEREO DECODER SOUND CONTROL
OSC
HPL
HPR
LOUT
ROUT
SPL
SPR
PILOT
L IN
R IN
IC202 HEADPHONE AMP
IC251,261 AUDIO MAIN AMP
IC251
IC261
SP L OUT
SP R OUT
MUTE Q201,202
MUTE Q204-206,209
STANDBY
IC601
15.5V
T.5V DET Q610
T.5V
STANDBY SWITCH Q611
STANDBY SW Q071
IC402 MON/TV SW
TV V2 OUT
TV V OUT
CN0102
Y IN
C IN
SSCP
CN0109
CN5100
FR Y IN
FR C IN
FR V IN
FR L IN
FR R IN
LC
CN0105
P.OFF
FS1 INVERT Q308
IC603 +9V REG
IC604 +9V REG
SW15.5V
+9V
CN0110 (1/2)
CN0100
CN0111
CN0104
VAR R
VAR L
HP R OUT
HP L OUT
L OUT
R OUT
MUTE
SP R OUT
SP L OUT
STANDBY
A
B
H
J


IC401 AUDIO/VIDEO SWITCH
C BUFFER Q401
Y BUFFER Q402
VIDEO BUFFER Q404
VIDEO BUFFER Q403
IC301 Y/C PROCESSOR
IC302 CHROMA OUT
PAL/NT SW Q301
2 FSC AMP Q302
SYNC SEP Q501,502
IC304 R.G.B JUNGLE
OUT PUT PROTECT Q303,304
VM AMP Q309
FS1 INVERT Q308
CN8113
IC872 NVM
IK DET Q306
IK SWITCH Q311,312
IC603 +5V REG
IC604 +9V REG
MON2
SCART3
SCART2
SCART1
FRONT IN
MON1
A (A/V PROCESSOR,Y/C JUNGLE R.G.B OUTPUT,A/V SWITCH)
R.G.B AMP Q710-712
R.G.B OUT
IK BUFFER Q713
R.G.B IK DET
IK DET Q714
V901 PICTURE TUBE
TO FV
C (R.G.B OUT)
KV-E2931D/E2931B /E3431D/E3431B ONLY
DRIVE SWITCH Q1701
AMP1-4
BUFF Q1707
DRIVE Q1703,1705
VM MUTE SW Q1708
VM (VM AMP)
NECK ASSY
IC1406 Y/B-Y/R-Y SWITCH
R-Y EQUALIZER Q1422
B-Y EQUALIZER Q1421
IC1404 P IN P PROCESSOR
R-Y BUFFER Q1407
B-Y BUFFER Q1409
Y BUFFER Q1408
FS BUFFER Q1406
IC1405 P IN P PHASE REG
SSCP SWITCH Q1416,1417
V PULSE SWITCH Q1413,1414
IC1401 CHROMA DECODER
IC1402
IC1403 P IN P PROCESSOR
X1401 3.58MHZ
X1402 4.43MHZ
R-Y BUFFER Q1402
B-Y BUFFER Q1403
Y AMP Q1404,1401
Y BUFFER Q1405
H OUT Q1415
V.P SWITCH Q1418,1419
IC1410 8V REG
P (PICTURE IN PICTURE)

5-3. CIRCUIT BOARDS LOCATION


VM
(KV-E2931D/ E3431D, E2931B/ E3431B)
M
H1
C
V
IF
P
H2
F1
J
A
D1
(KV-E3431D, E3431B)
D
F2
B1
K

5-4. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

— Conductor Side —

Note:

- All capacitors are in µF unless otherwise noted.
  pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All electrolytics are in 50V unless otherwise noted.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000KΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4W
- METAL FILM (:RN) resistors in 1%, 1/6W unless otherwise noted.
- Chip resistors are 1/10W otherwise noted.
- METAL CHIP (:RN-CP) resistors in 0.5%, 1/6W unless otherwise noted.
- [W]: nonflammable resistor.
- △: internal component.
- ☐: panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- ⊥ : earth-ground.
- ⏚ : earth-chassis.
- All voltages are in V.
- Voltage are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 MΩ digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerance.
- No mark : PAL or COMMON
- ( ) : SECAM
- [ ] : NTSC 4.43
- < > : NTSC 3.58
- ━━ : B+ bus.
- ╍╍╍ : B- bus.
- ⇛ : signal path. (RF)
- Circuled numbers are waveform references.

Reference information

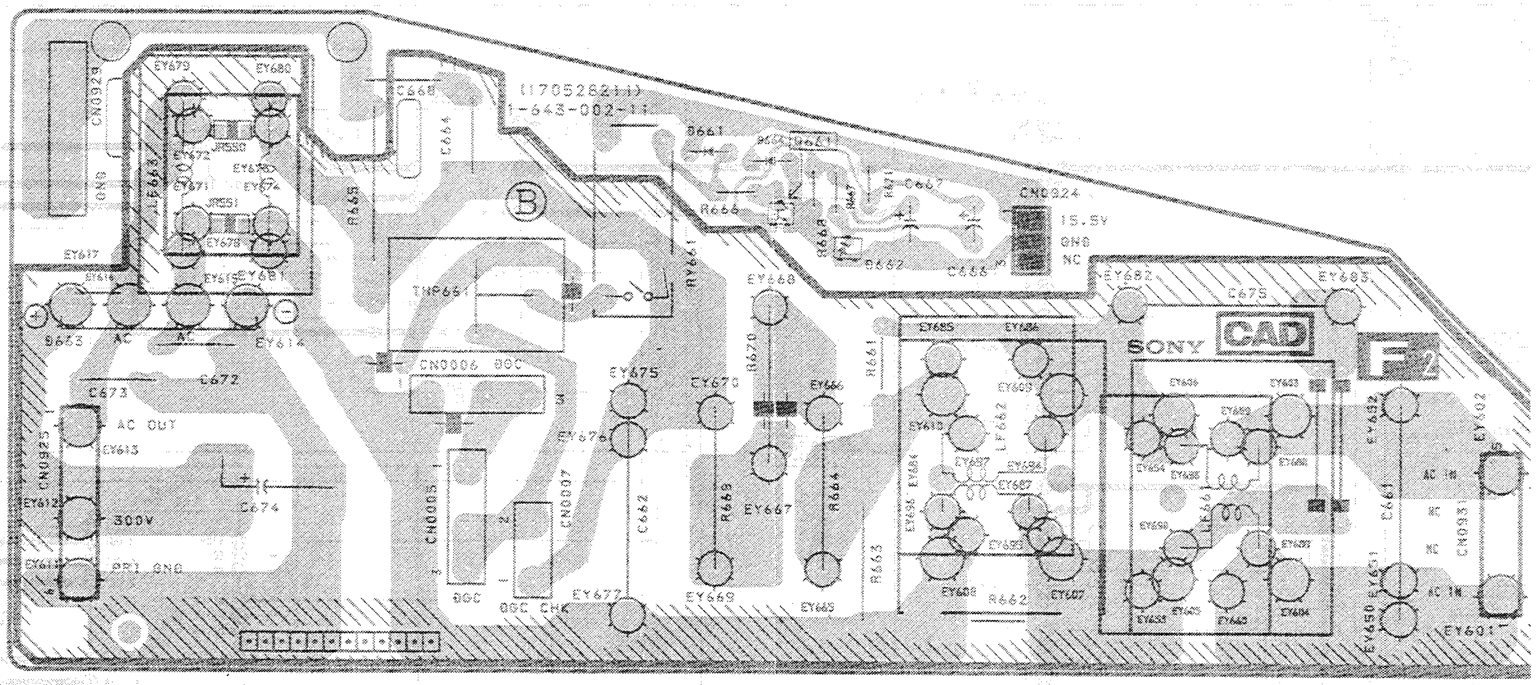
RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
	: ※	ADJUSTMENT RESISTOR
COIL	: LF-8L	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note:
The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

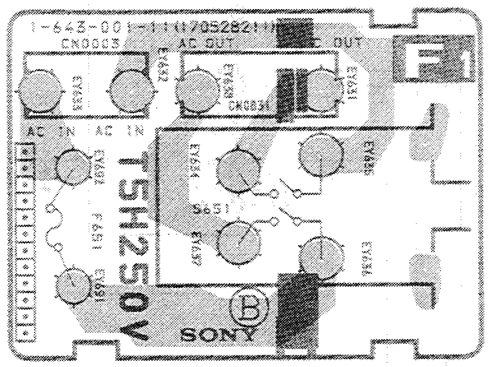
Note:
Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

F2 [LINE FILTER] **F1** [AC IN, POWER SW] **H1** [Y/C OUT, VIDEO OUT, AUDIO I/O, A/V SWITCH]

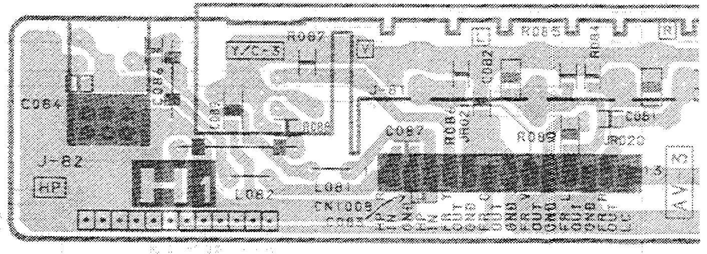
— F2 Board —


CN0928
EY679
EY680
JR550
JR551
EY678
EY681
C668
(1705282(1))
1-643-002-11
C664
R665
R666
R661
C662
CN0924
15.5V
GND
NC
EY682
EY683
EY668
C675
SONY
CAD
F2
EY617
R663
AC
EY614
THP661
CN0006
DGC
C673
C672
AC OUT
EY613
EY612
C674
300V
PRI GND
EY675
EY670
R670
EY666
EY676
CN0005
CN0007
R669
EY667
R664
C663
R662
EY669
EY677
DGC CHK
EY665
EY601
EY602
AC IN
NC
CN0931
C661
EY650

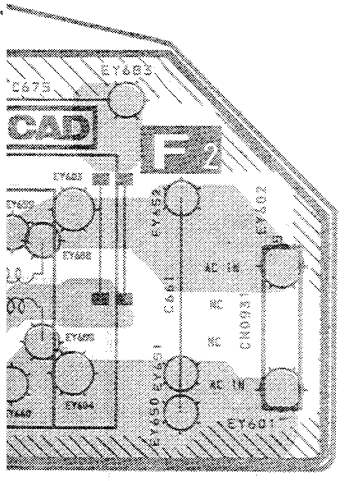
— F1 Board —


1-643-001-11 (1705282(1))
CN0003
AC OUT
OUT
F1
EY633
EY632
EY630
CN0834
EY631
AC IN
AC IN
EY634
EY635
S651
F651
T5H250V
SONY
B

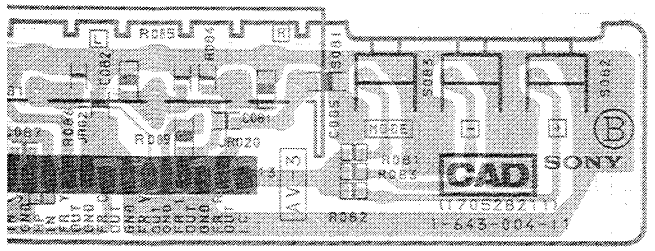
— H1 Board —


R087
R085
Y/C-3
C084
C086
R084
C087
R089
JR020
J-82
HP
H1
L082
L081
CN1008
A/V

CH]



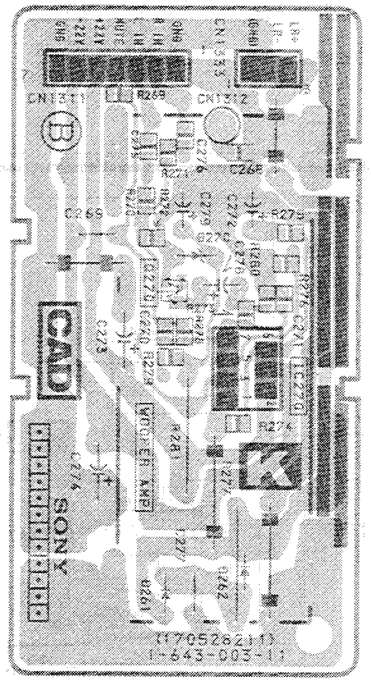
CAD
F2
EY601



CAD
SONY
1-643-004-11

K [WOOFER AMP]

— K Board —

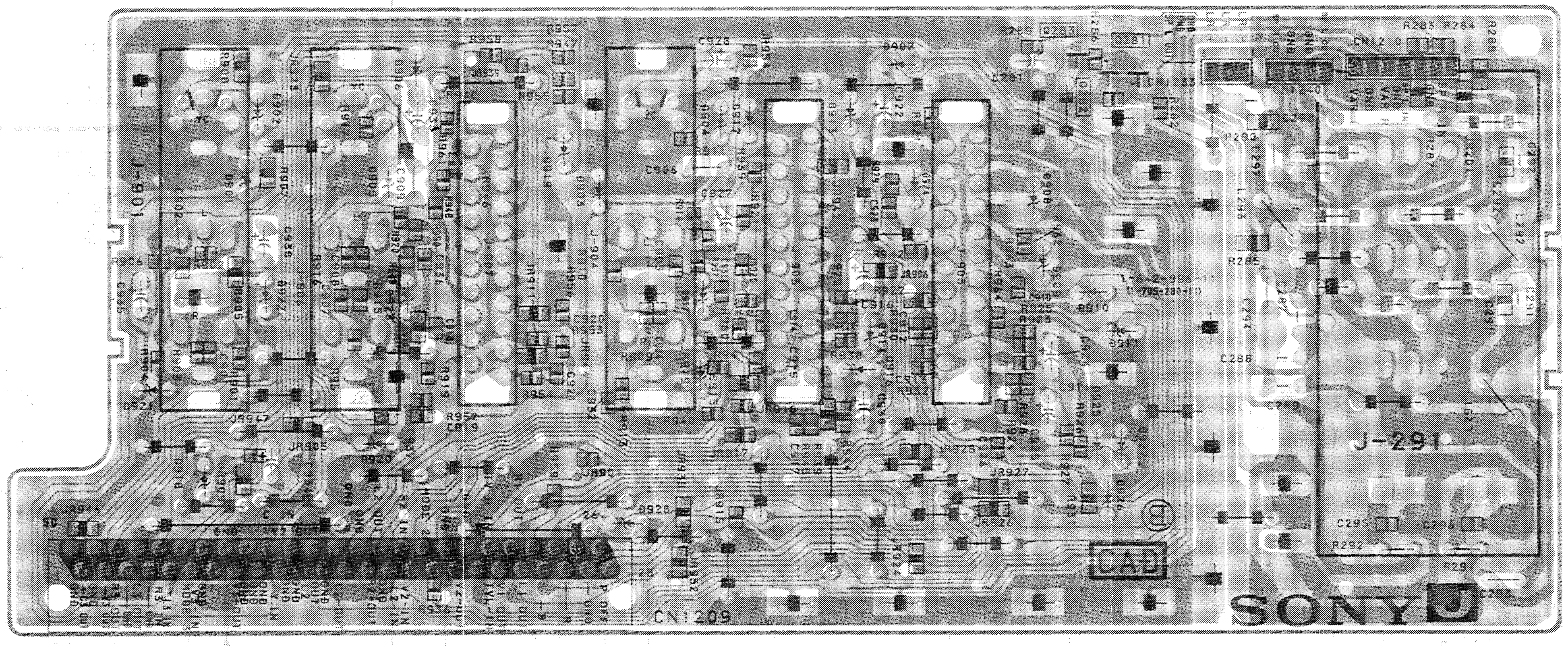


CN1311
CN1312
CAD
SONY
WOOFER AMP
K
1-643-003-11

J [AUDIO/ VIDEO I/O]

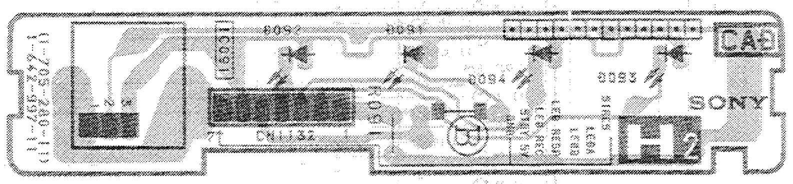
H2 [REMOTE SENSOR, A.B SAT AND RES INDICATOR]

— J Board —



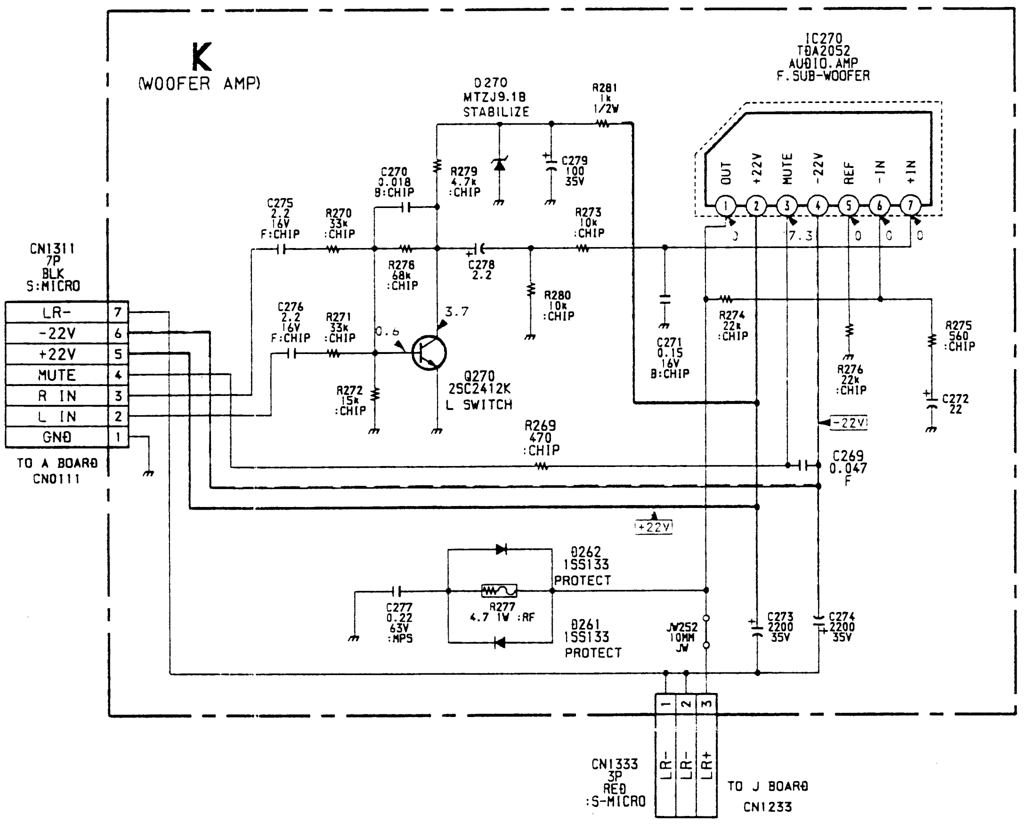
CN1209
J-291
CAD
SONY
J

— H2 Board —

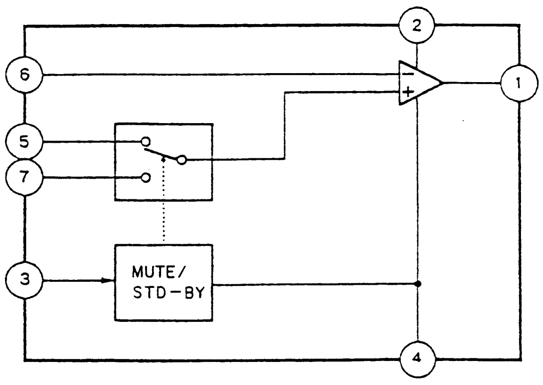


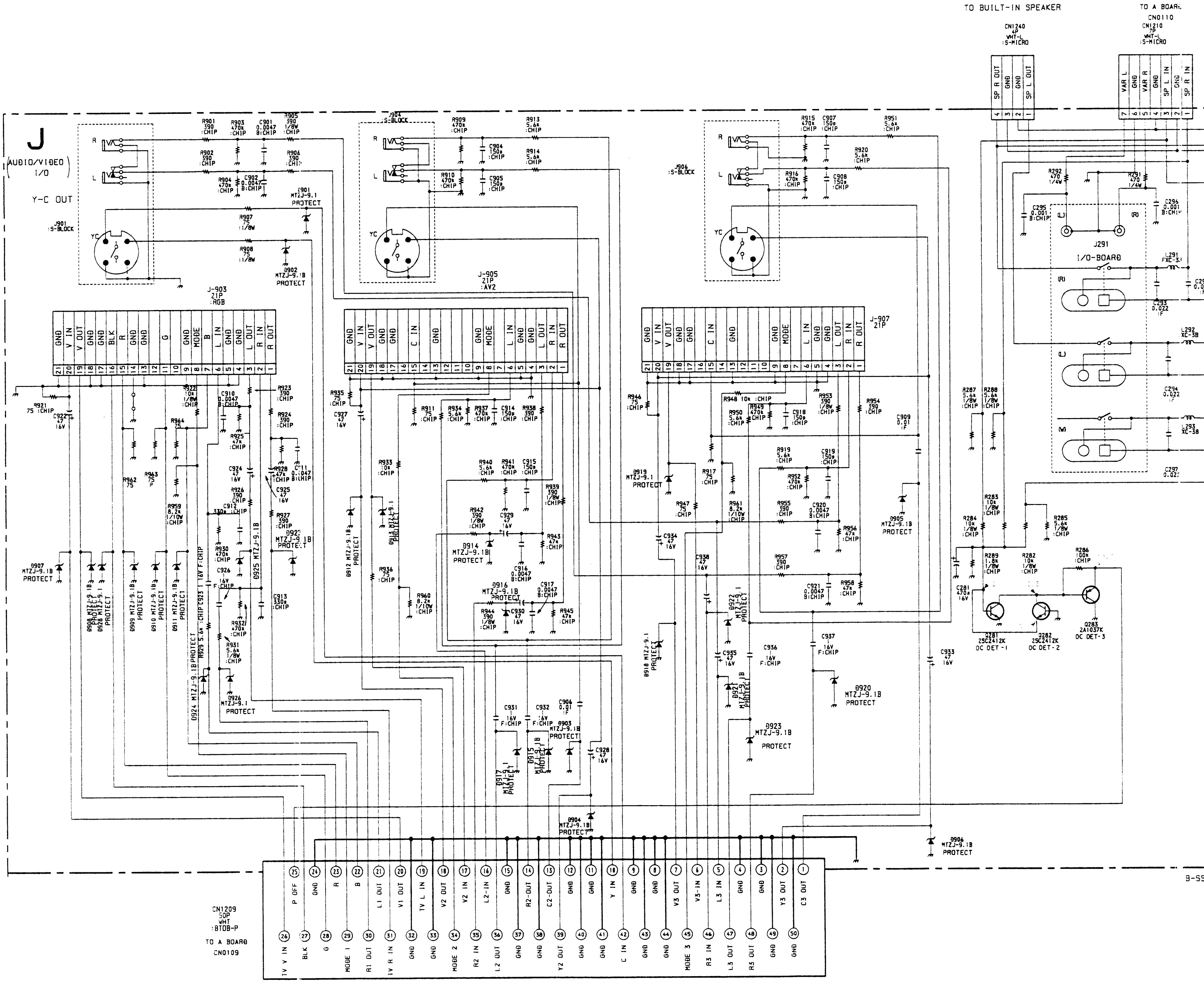
CN1132
CAD
SONY
H2

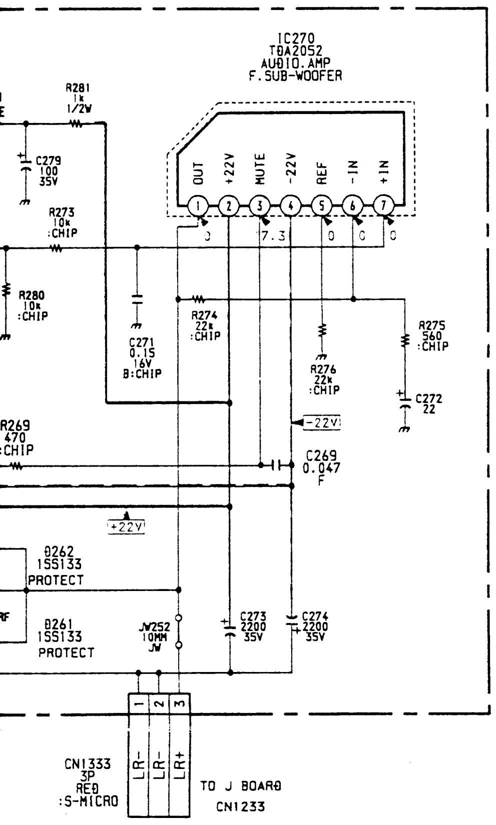
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.


K
(WOOFER AMP)
IC270
TDA2052
AUDIO AMP
F.SUB-WOOFER
D270
MTZJ9.1B
STABILIZE
R281
1k
1/2W
C279
100
35V
C270
0.018
B:CHIP
R279
4.7k
:CHIP
C275
2.2
16V
F:CHIP
R270
33k
:CHIP
R273
10k
:CHIP
R276
68k
:CHIP
C278
2.2
R280
10k
:CHIP
CN1311
7P
BLK
S:MICRO
LR-
-22V
+22V
MUTE
R IN
L IN
GND
TO A BOARD
CN0111
C276
2.2
16V
F:CHIP
R271
33k
:CHIP
Q270
2SC2412K
L SWITCH
R272
15k
:CHIP
R269
470
:CHIP
C271
0.15
16V
B:CHIP
R274
22k
:CHIP
R276
22k
:CHIP
R275
560
:CHIP
C272
22
C269
0.047
F
OUT
+22V
MUTE
-22V
REF
-IN
+IN
7.3
-22V
+22V
D262
1SS133
PROTECT
C277
0.22
63V
:MPS
R277
4.7 1W :RF
D261
1SS133
PROTECT
JW252
10MM
:JW
C273
2200
35V
C274
2200
35V
CN1333
3P
RED
:S-MICRO
LR-
LR-
LR+
TO J BOARD
CN1233
8-SS4145<AEP>-K..

K BOARD IC270 TDA2052

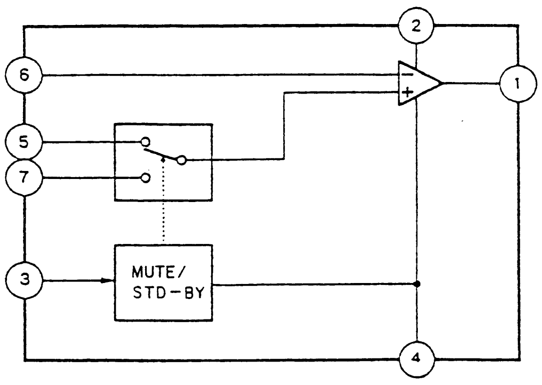

2
6
1
5
7
3
4
MUTE/
STD-BY

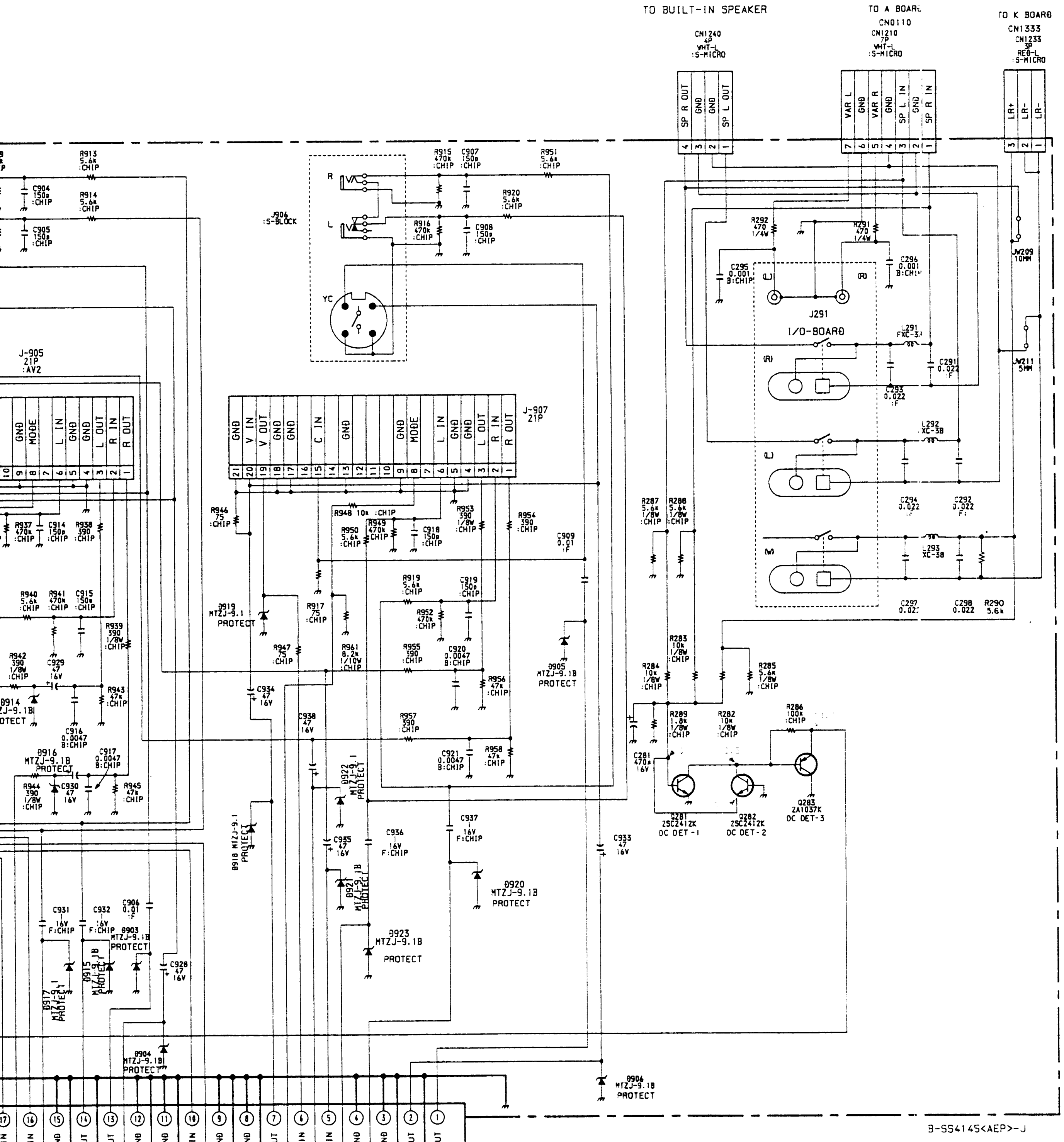

J
(AUDIO/VIDEO I/O)
Y-C OUT
J901
:S-BLOCK
J904
:S-BLOCK
J906
:S-BLOCK
R
L
YC
J-903
21P
:RGB
J-905
21P
:AV2
J-907
21P
D901
MTZJ-9.1
PROTECT
D902
MTZJ-9.1B
PROTECT
D905
MTZJ-9.1B
PROTECT
D920
MTZJ-9.1B
PROTECT
D923
MTZJ-9.1B
PROTECT
D903
MTZJ-9.1B
PROTECT
D904
MTZJ-9.1B
PROTECT
D906
MTZJ-9.1B
PROTECT
D907
MTZJ-9.1B
PROTECT
D914
MTZJ-9.1B
PROTECT
D916
MTZJ-9.1B
PROTECT
D926
MTZJ-9.1
PROTECT
TO BUILT-IN SPEAKER
CN1240
4P
WHT-L
:S-MICRO
SP R OUT
GND
GND
SP L OUT
TO A BOARD
CN0110
CN1210
7P
WHT-L
:S-MICRO
VAR L
GND
VAR R
GND
SP L IN
GND
SP R IN
J291
I/O-BOARD
Q281
2SC2412K
DC DET-1
Q282
2SC2412K
DC DET-2
Q283
2A1037K
DC DET-3
CN1209
50P
WHT
:B10B-P
TO A BOARD
CN0109
P OFF
GND
R
B
L1 OUT
V1 OUT
TV L IN
V2 OUT
V2 IN
L2-IN
GND
R2-OUT
C2-OUT
GND
GND
Y IN
GND
GND
V3 OUT
V3-IN
L3 IN
GND
GND
Y3 OUT
C3 OUT
TV V IN
BLK
G
MODE 1
R1 OUT
TV R IN
GND
MODE 2
R2 IN
L2 OUT
Y2 OUT
GND
GND
C IN
GND
MODE 3
R3 IN
L3 OUT
R3 OUT
GND


IC270
TDA2052
AUDIO AMP
F.SUB-WOOFER
R281 1k 1/2W
C279 100 35V
R273 10k :CHIP
OUT
+22V
MUTE
-22V
REF
-IN
+IN
7.3
R280 10k :CHIP
C271 0.15 16V B:CHIP
R274 22k :CHIP
R275 560 :CHIP
R276 22k :CHIP
C272 22
-22V
R269 470 :CHIP
C269 0.047 F
+22V
D262 1SS133 PROTECT
D261 1SS133 PROTECT
JW252 10MM JW
C273 2200 35V
C274 2200 35V
CN1333 3P RED :S-MICRO
LR-
LR-
LR+
TO J BOARD CN1233

B-SS4145<AEP>-K..

K BOARD IC270 TDA2052

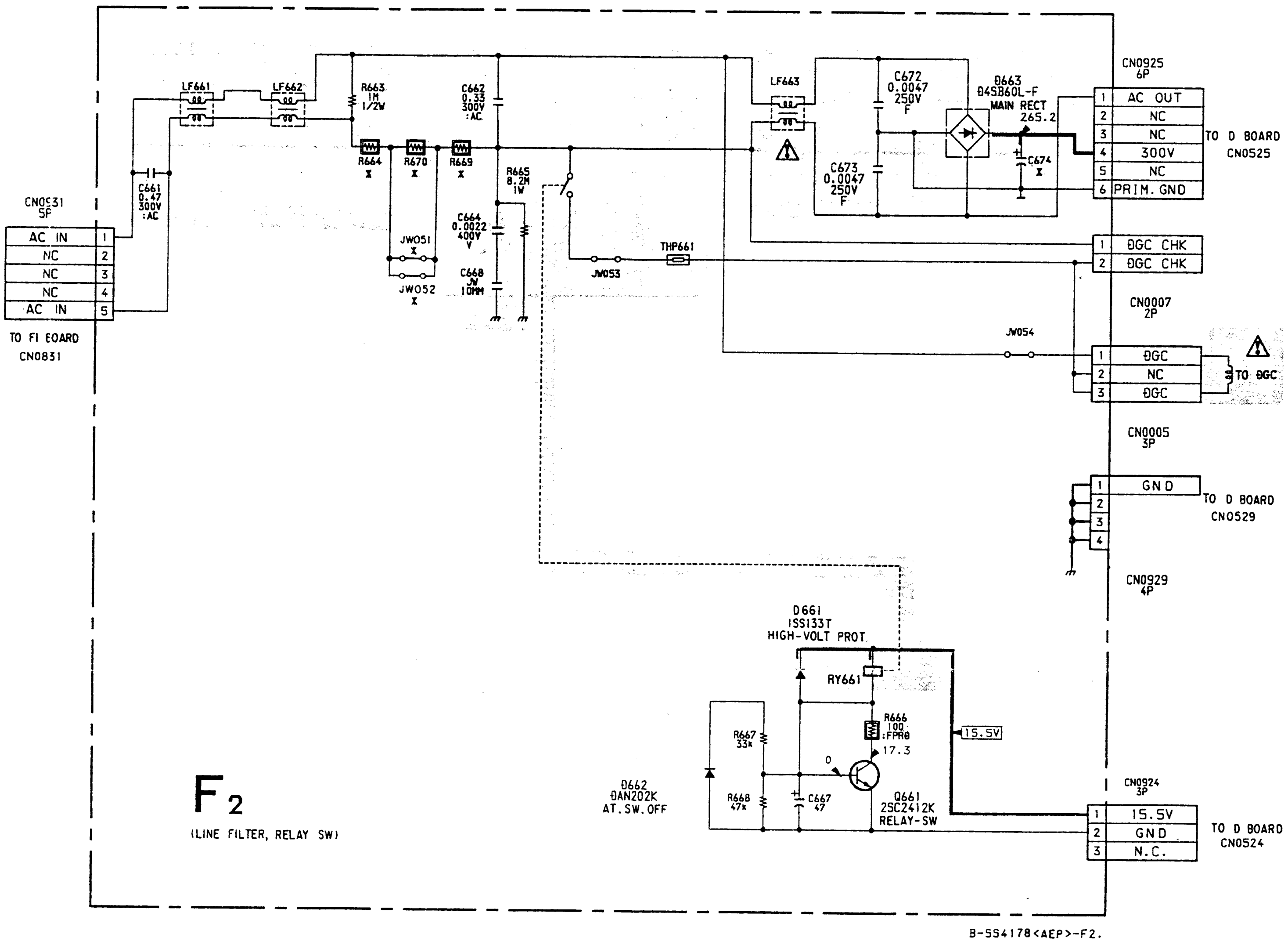

2
6
1
5
7
3
MUTE/
STD-BY
4


TO BUILT-IN SPEAKER
CN1240 4P WHT-L :S-MICRO
SP R OUT
GND
GND
SP L OUT
TO A BOARD CN0110
CN1210 7P WHT-L :S-MICRO
VAR L
GND
VAR R
SP L IN
GND
SP R IN
TO K BOARD CN1333 3P RED-L :S-MICRO
LR+
LR-
LR-
R913 5.6k :CHIP
C904 150p :CHIP
R914 5.6k :CHIP
C905 150p :CHIP
J906 :S-BLOCK
R915 470k :CHIP
C907 150p :CHIP
R951 5.6k :CHIP
R920 5.6k :CHIP
R916 470k :CHIP
C908 150p :CHIP
YC
R292 470 1/4W
R291 470 1/4W
C295 0.001 B:CHIP
C296 0.001 B:CHIP
JW209 10MM
J291 I/O-BOARD
L291 FXC-3A
C291 0.022 F
C293 0.022 F
L292 XC-3B
JW211 5MM
J-905 21P :AV2
GND
MODE
L IN
GND
GND
L OUT
R OUT
J-907 21P
GND
V IN
V OUT
GND
GND
C IN
GND
GND
MODE
L IN
GND
GND
L OUT
R IN
R OUT
R946 75 :CHIP
R948 10k :CHIP
R953 390 1/8W :CHIP
R954 390 :CHIP
R950 5.6k :CHIP
R949 470k :CHIP
C918 150p :CHIP
C909 0.01 F
R287 5.6k 1/8W :CHIP
R288 5.6k 1/8W :CHIP
C294 0.022 F
C292 0.022 F
L293 XC-3B
C297 0.022
C298 0.022
R290 5.6k
R937 470k :CHIP
C914 150p :CHIP
R938 390 :CHIP
R940 5.6k :CHIP
R941 470k :CHIP
C915 150p :CHIP
R939 390 1/8W :CHIP
R919 5.6k :CHIP
C919 150p :CHIP
D919 MTZJ-9.1 PROTECT
R917 75 :CHIP
R952 470k :CHIP
R947 75 :CHIP
R961 8.2k 1/10W :CHIP
R955 390 :CHIP
C920 0.0047 B:CHIP
R956 47k :CHIP
D905 MTZJ-9.1B PROTECT
R283 10k 1/8W :CHIP
R284 10k 1/8W :CHIP
R285 5.6k 1/8W :CHIP
R942 390 1/8W :CHIP
C929 47 16V
R943 47k :CHIP
D914 MTZJ-9.1B PROTECT
C934 47 16V
C938 47 16V
R957 390 :CHIP
R289 1.8k 1/8W :CHIP
R282 10k 1/8W :CHIP
R286 100k :CHIP
C916 0.0047 B:CHIP
D916 MTZJ-9.1B PROTECT
C917 0.0047 B:CHIP
C921 0.0047 B:CHIP
R958 47k :CHIP
C281 470 16V
R944 390 1/8W :CHIP
C930 47 16V
R945 47k :CHIP
D922 MTZJ-9.1 PROTECT
Q281 2SC2412K DC DET-1
Q282 2SC2412K DC DET-2
Q283 2A1037K DC DET-3
D918 MTZJ-9.1 PROTECT
C935 47 16V
C936 16V F:CHIP
C937 16V F:CHIP
C933 47 16V
D921 MTZJ-9.1B PROTECT
D920 MTZJ-9.1B PROTECT
D923 MTZJ-9.1B PROTECT
C931 16V F:CHIP
C932 16V F:CHIP
D903 MTZJ-9.1B PROTECT
C906 0.01 F
D917 MTZJ-9.1 PROTECT
D915 MTZJ-9.1B PROTECT
C928 47 16V
D904 MTZJ-9.1B PROTECT
D906 MTZJ-9.1B PROTECT
V2 IN
L2-IN
GND
R2-OUT
C2-OUT
GND
GND
Y IN
GND
GND
V3 OUT
V3-IN
L3 IN
GND
GND
Y3 OUT
C3 OUT
R2 IN
L2 OUT
GND
GND
Y2 OUT
GND
GND
C IN
GND
GND
MODE 3
R3 IN
L3 OUT
R3 OUT
GND
GND

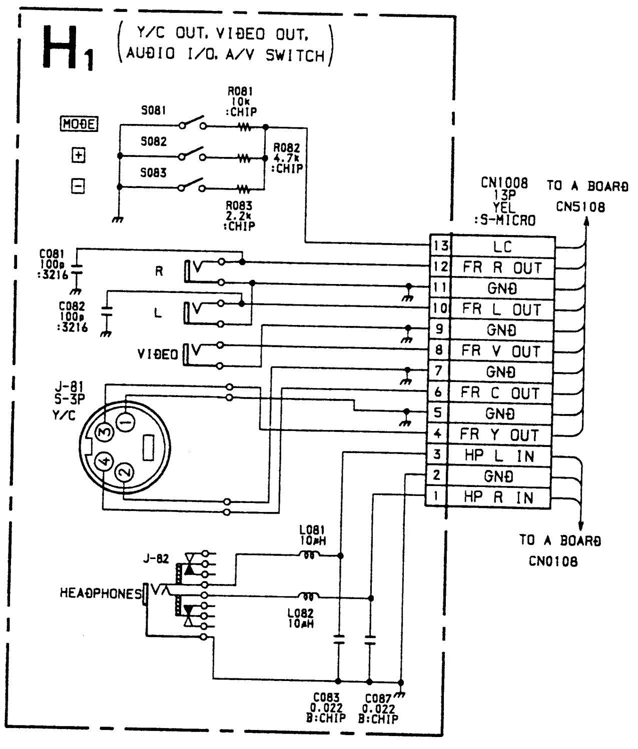
B-SS4145<AEP>-J

F2 BOARD : ⁎ MARK

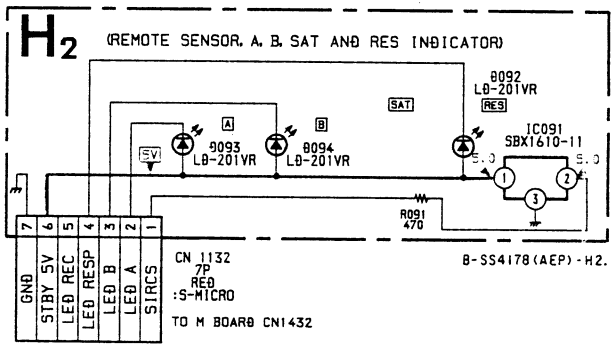
	KV-E2531D/E KV-E2531B/E
⚠ C674	220 400V
JW051	—
JW052	—
⚠ LF661	1-424-391-11
⚠ LF662	1-424-391-11
⚠ R664	1.8 10W
⚠ R669	1.8 10W
⚠ R670	—


F2
(LINE FILTER, RELAY SW)
CN0531
5P
AC IN
NC
NC
NC
AC IN
TO F1 BOARD
CN0831
LF661
LF662
C661
0.47
300V
:AC
R663
1M
1/2W
C662
0.33
300V
:AC
R664
R670
R669
R665
8.2M
1W
C664
0.0022
400V
C668
JW
10MM
JW051
JW052
JW053
THP661
LF663
C672
0.0047
250V
F
C673
0.0047
250V
F
D663
D4SB60L-F
MAIN RECT
265.2
C674
CN0925
6P
AC OUT
NC
NC
300V
NC
PRIM. GND
TO D BOARD
CN0525
DGC CHK
DGC CHK
CN0007
2P
JW054
DGC
NC
DGC
TO DGC
CN0005
3P
GND
TO D BOARD
CN0529
CN0929
4P
D661
1SS133T
HIGH-VOLT PROT
RY661
R666
100
:FPRD
17.3
15.5V
R667
33k
R668
47k
C667
47
0
D662
DAN202K
AT.SW.OFF
Q661
2SC2412K
RELAY-SW
CN0924
3P
15.5V
GND
N.C.
TO D BOARD
CN0524

B-SS4178<AEP>-F2.

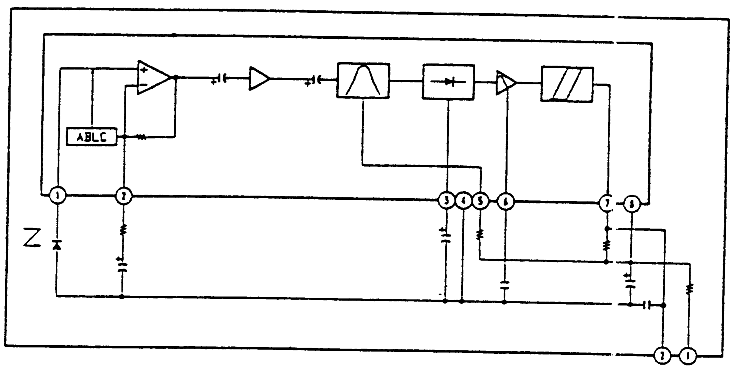

H1
(Y/C OUT, VIDEO OUT, AUDIO I/O, A/V SWITCH)
MODE
+
−
S081
S082
S083
R081
10k
:CHIP
R082
4.7k
:CHIP
R083
2.2k
:CHIP
C081
100p
:3216
C082
100p
:3216
R
L
VIDEO
J-81
S-3P
Y/C
J-82
HEADPHONES
L081
10µH
L082
10µH
C083
0.022
B:CHIP
C087
0.022
B:CHIP
CN1008
13P
YEL
:S-MICRO
TO A BOARD
CN5108
LC
FR R OUT
GND
FR L OUT
GND
FR V OUT
GND
FR C OUT
GND
FR Y OUT
HP L IN
GND
HP R IN
TO A BOARD
CN0108

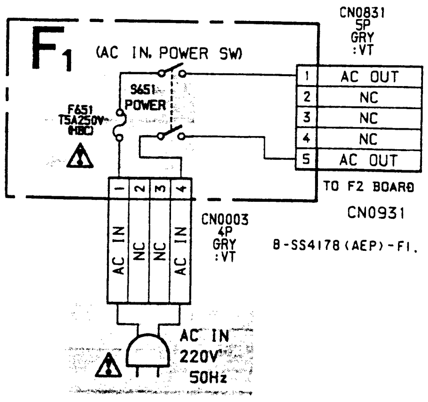
B-SS4178(AEP)-H1.


H2
(REMOTE SENSOR, A, B, SAT AND RES INDICATOR)
D092
LD-201VR
RES
SAT
A
B
D093
LD-201VR
D094
LD-201VR
5V
IC091
SBX1610-11
5.0
5.0
R091
470
GND
STBY 5V
LED REC
LED RESP
LED B
LED A
SIRCS
CN 1132
7P
RED
:S-MICRO
TO M BOARD CN1432

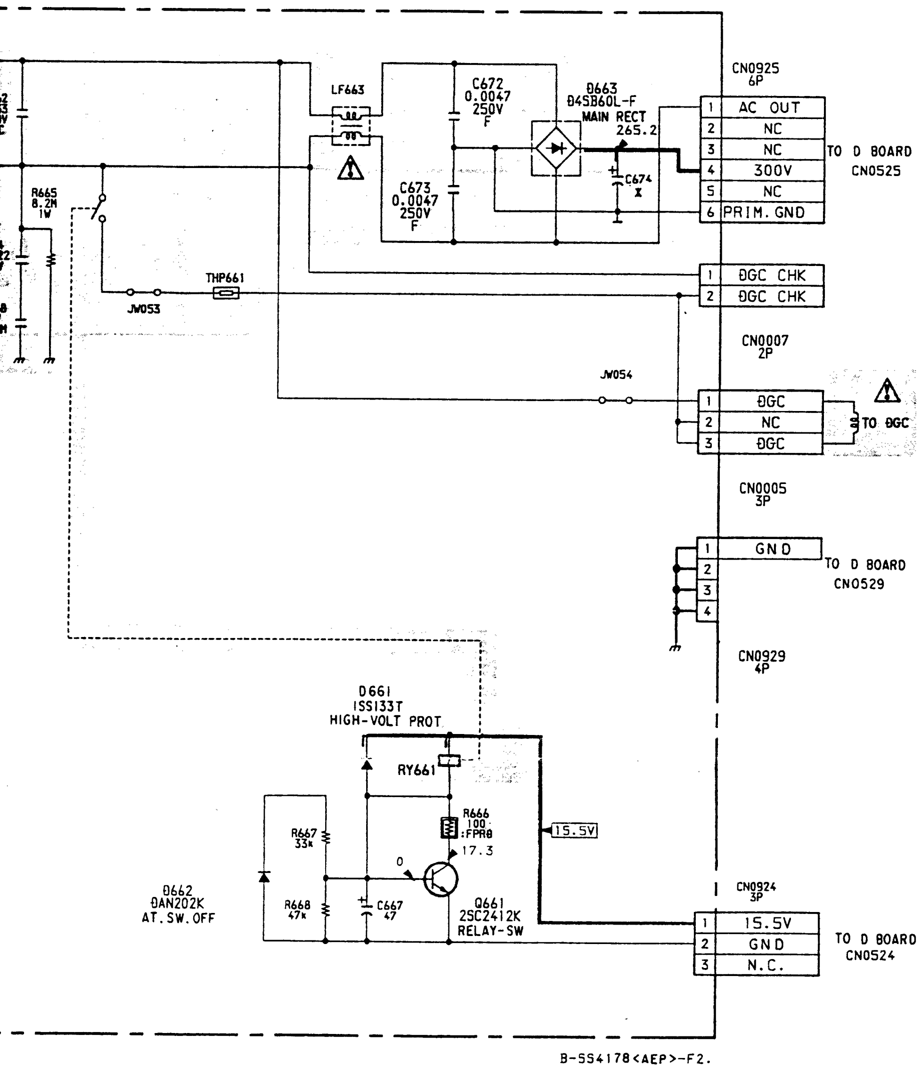
B-SS4178(AEP)-H2.

H2 BOARD IC091 SBX1610-11



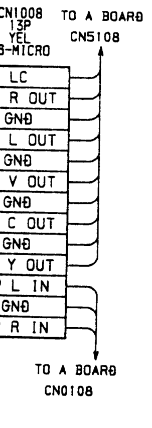

F1
(AC IN, POWER SW)
S651
POWER
F651
T5A250V
(HBC)
CN0831
5P
GRY
:VT
AC OUT
NC
NC
NC
AC OUT
TO F2 BOARD
CN0931
AC IN
NC
NC
AC IN
CN0003
4P
GRY
:VT
AC IN
220V
50Hz

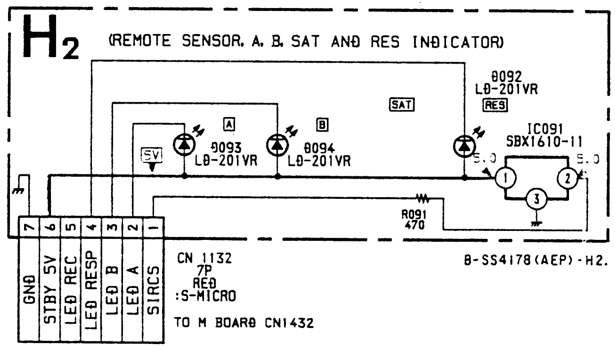
B-SS4178(AEP)-F1.


LF663
C672
0.0047
250V
F
C673
0.0047
250V
F
D663
D4SB60L-F
MAIN RECT
265.2
C674
X
R665
8.2M
1W
THP661
JW053
JW054
CN0925
6P
1 AC OUT
2 NC
3 NC
4 300V
5 NC
6 PRIM. GND
TO D BOARD
CN0525
1 DGC CHK
2 DGC CHK
CN0007
2P
1 DGC
2 NC
3 DGC
TO DGC
CN0005
3P
1 GND
2
3
4
TO D BOARD
CN0529
CN0929
4P
D661
1SS133T
HIGH-VOLT PROT
RY661
R666
100
:FPRD
17.3
15.5V
R667
33k
0
D662
DAN202K
AT.SW.OFF
R668
47k
C667
47
Q661
2SC2412K
RELAY-SW
CN0924
3P
1 15.5V
2 GND
3 N.C.
TO D BOARD
CN0524
B-SS4178<AEP>-F2.

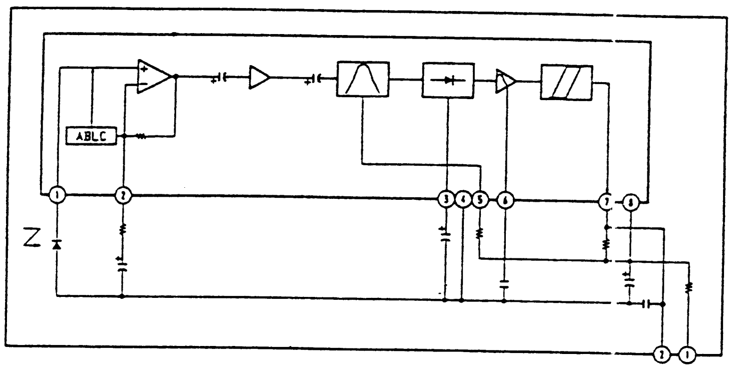
F2 BOARD : ⁑ MARK

	KV-E2531D/E2931D KV-E2531B/E2931B	KV-E3431D KV-E3431B
⚠ C674	220 400V	330 400V
JW051	—	5MM
JW052	—	5MM
⚠ LF661	1-424-391-11	1-424-436-11
⚠ LF662	1-424-391-11	1-424-436-11
⚠ R664	1.8 10W : RB	1.2 10W : RB
⚠ R669	1.8 10W : RB	1.2 10W : RB
⚠ R670	—	1.2 10W : RB


CN1008
13P
YEL
S-MICRO
TO A BOARD
CN5108
LC
R OUT
GND
L OUT
GND
V OUT
GND
C OUT
GND
Y OUT
L IN
GND
R IN
TO A BOARD
CN0108


H2
(REMOTE SENSOR, A, B, SAT AND RES INDICATOR)
D092
LD-201VR
RES
SAT
A
B
D093
LD-201VR
D094
LD-201VR
5V
IC091
SBX1610-11
5.0
5.0
R091
470
7 GND
6 STBY 5V
5 LED REC
4 LED RESP
3 LED B
2 LED A
1 SIRCS
CN 1132
7P
RED
:S-MICRO
TO M BOARD CN1432
B-SS4178(AEP)-H2.

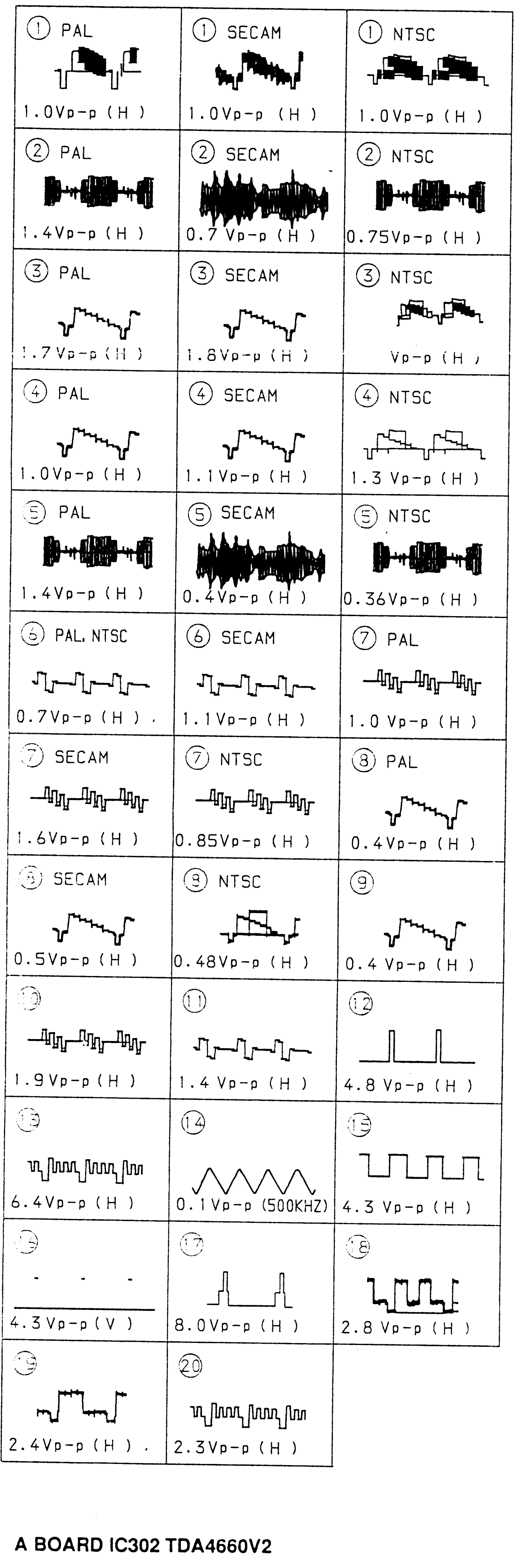
H2 BOARD IC091 SBX1610-11


ABLC
1
2
3
4
5
6
7
8

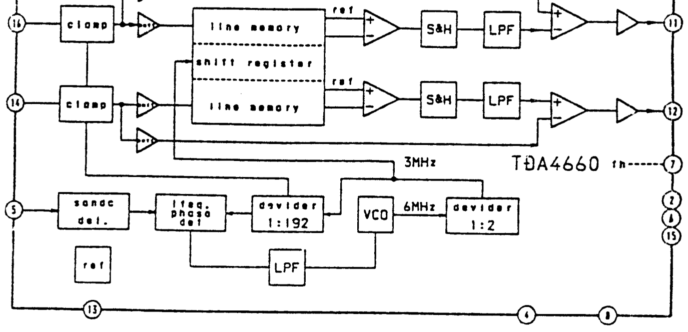
A BOARD : ⁑MARK

	KV-E2531D/E2931D/ E3431D	KV-E2531B/E2931B/ E3431B
C111	—	0.001 : B
IFB101	IFH-389	IFH-389F

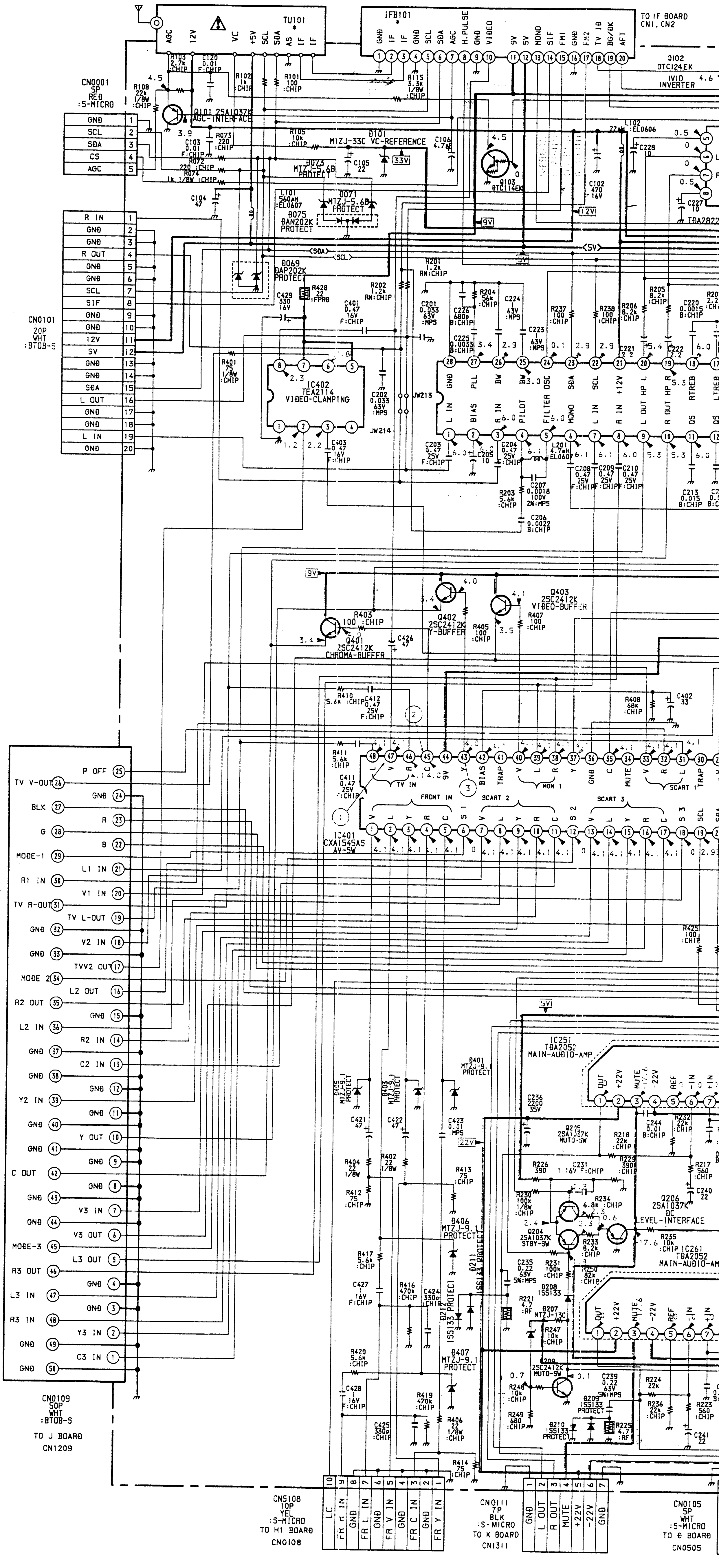
— A Board —



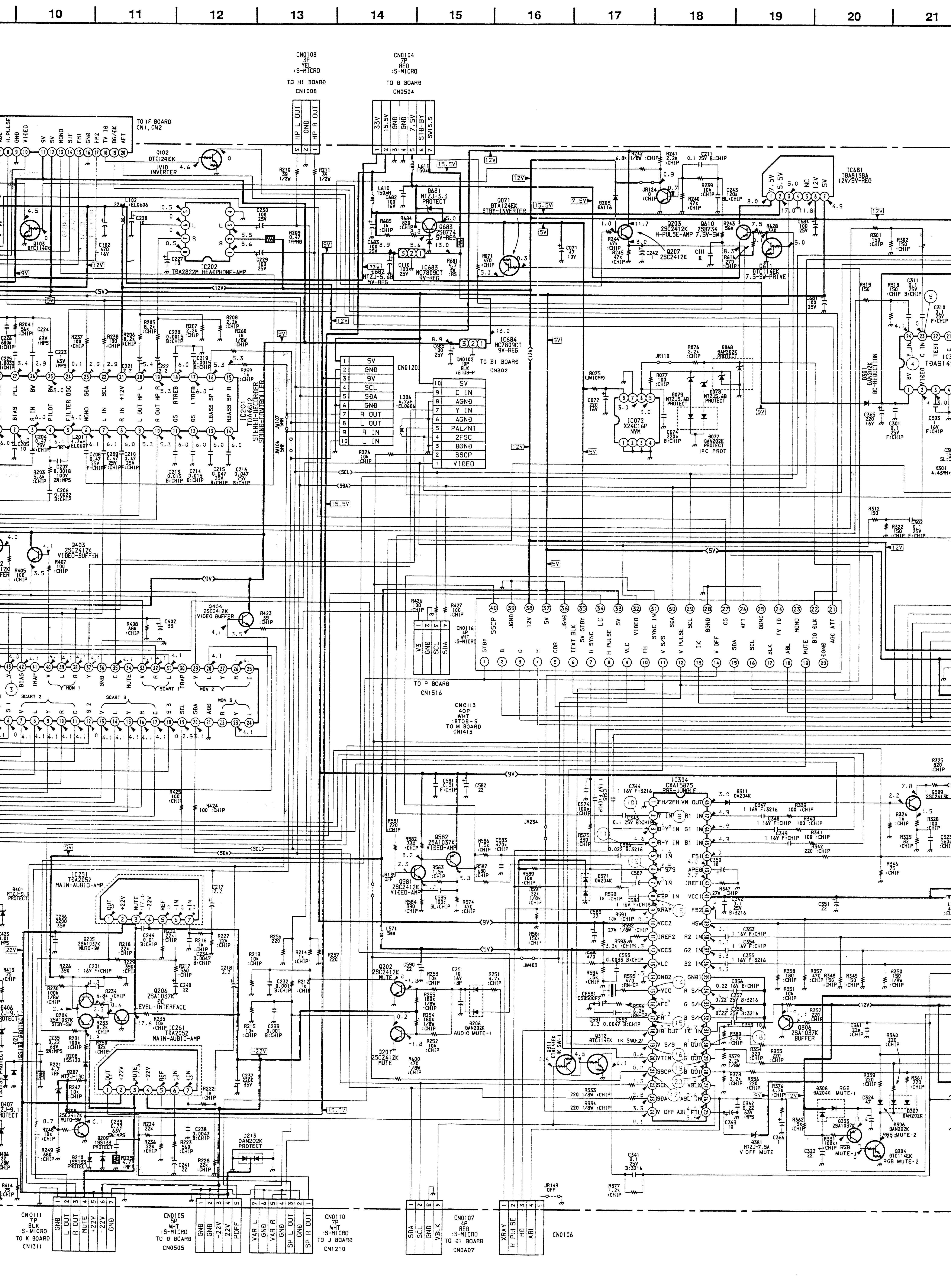
A BOARD IC302 TDA4660V2



clamp
clamp
line memory
shift register
line memory
ref
ref
S&H
S&H
LPF
LPF
3MHz
TDA4660
sandc del.
ifeq. phase det
devider 1:192
VCO
6MHz
devider 1:2
LPF
ref



TU101
AGC
12V
VC
+5V
SCL
SDA
AS
IF
IF
IFB101
GND
H.PULSE
VIDEO
5V
MONO
SIF
FM1
FM2
TV I8
BG/DK
AFT
TO IF BOARD CN1, CN2
Q102 DTC124EK IVID INVERTER
CN0001 5P RED :S-MICRO
GND
SCL
SDA
CS
AGC
Q101 2SA1037K AGC-INTERFACE
D101 MTZJ-33C VC-REFERENCE
D073 MTZJ-5.6B PROTECT
D071 MTZJ-5.6B PROTECT
D075 DAN202K PROTECT
Q103 DTC114EK
L101 560μH :EL0607
L102 22μH :EL0606
D069 DAP202K PROTECT
CN0101 20P WHT :BTOB-S
R IN
R OUT
SIF
12V
5V
L OUT
L IN
IC402 TEA2114 VIDEO-CLAMPING
PLL
BW
PILOT
FILTER OSC
MONO
BIAS
L OUT HP L
R OUT HP R
ATREB
Q401 2SC2412K CHROMA-BUFFER
Q402 2SC2412K Y-BUFFER
Q403 2SC2412K VIDEO-BUFFER
IC401 CXA1545AS AV-SW
FRONT IN
SCART 2
SCART 3
SCART 1
MON 1
BIAS
TRAP
MUTE
CN0109 50P WHT :BTOB-S TO J BOARD CN1209
P OFF
TV V-OUT
BLK
MODE-1
R1 IN
TV R-OUT
TV L-OUT
V2 IN
TVV2 OUT
MODE 2
L2 OUT
R2 OUT
L2 IN
R2 IN
C2 IN
Y2 IN
Y OUT
C OUT
V3 IN
V3 OUT
MODE-3
L3 OUT
R3 OUT
L3 IN
R3 IN
Y3 IN
C3 IN
IC251 TDA2052 MAIN-AUDIO-AMP
IC261 TDA2052 MAIN-AUDIO-AMP
D401 MTZJ-9.1 PROTECT
D403 MTZJ-9.1 PROTECT
D406 MTZJ-9.1 PROTECT
D407 MTZJ-9.1 PROTECT
Q205 2SA1037K MUTO-SW
Q204 2SA1037K STBY-SW
Q206 2SA1037K DC LEVEL-INTERFACE
Q209 2SC2412K MUTO-SW
D207 MTZJ-13C
D208 1SS133
D209 1SS133 PROTECT
D210 1SS133 PROTECT
D211 1SS133 PROTECT
22V
9V
5V
12V
33V
CN5108 10P YEL :S-MICRO TO H1 BOARD CN0108
FR R IN
FR L IN
FR V IN
FR C IN
FR Y IN
CN0111 7P BLK :S-MICRO TO K BOARD CN1311
L OUT
R OUT
MUTE
+22V
-22V
CN0105 5P WHT :S-MICRO TO B BOARD CN0505


10
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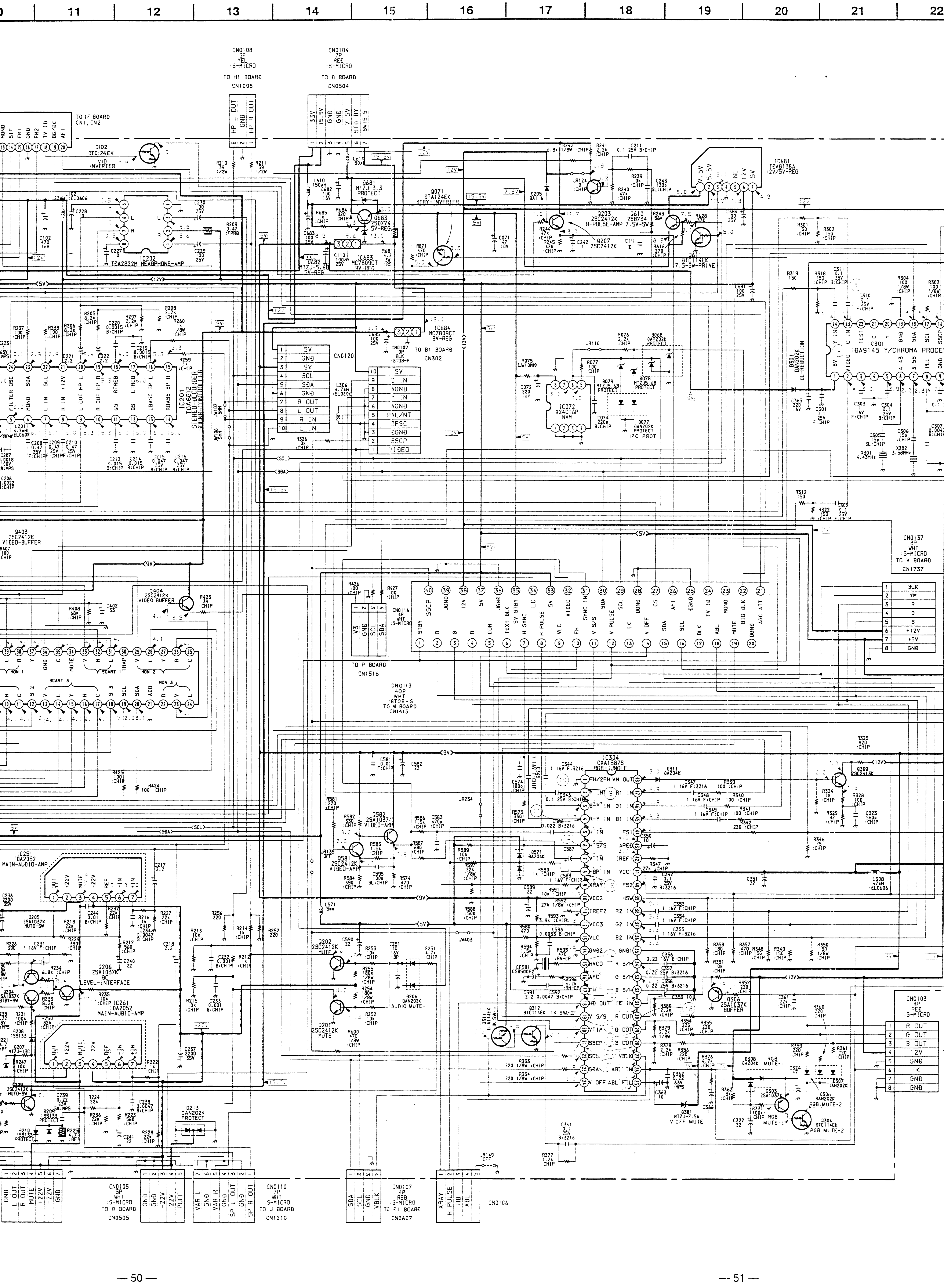
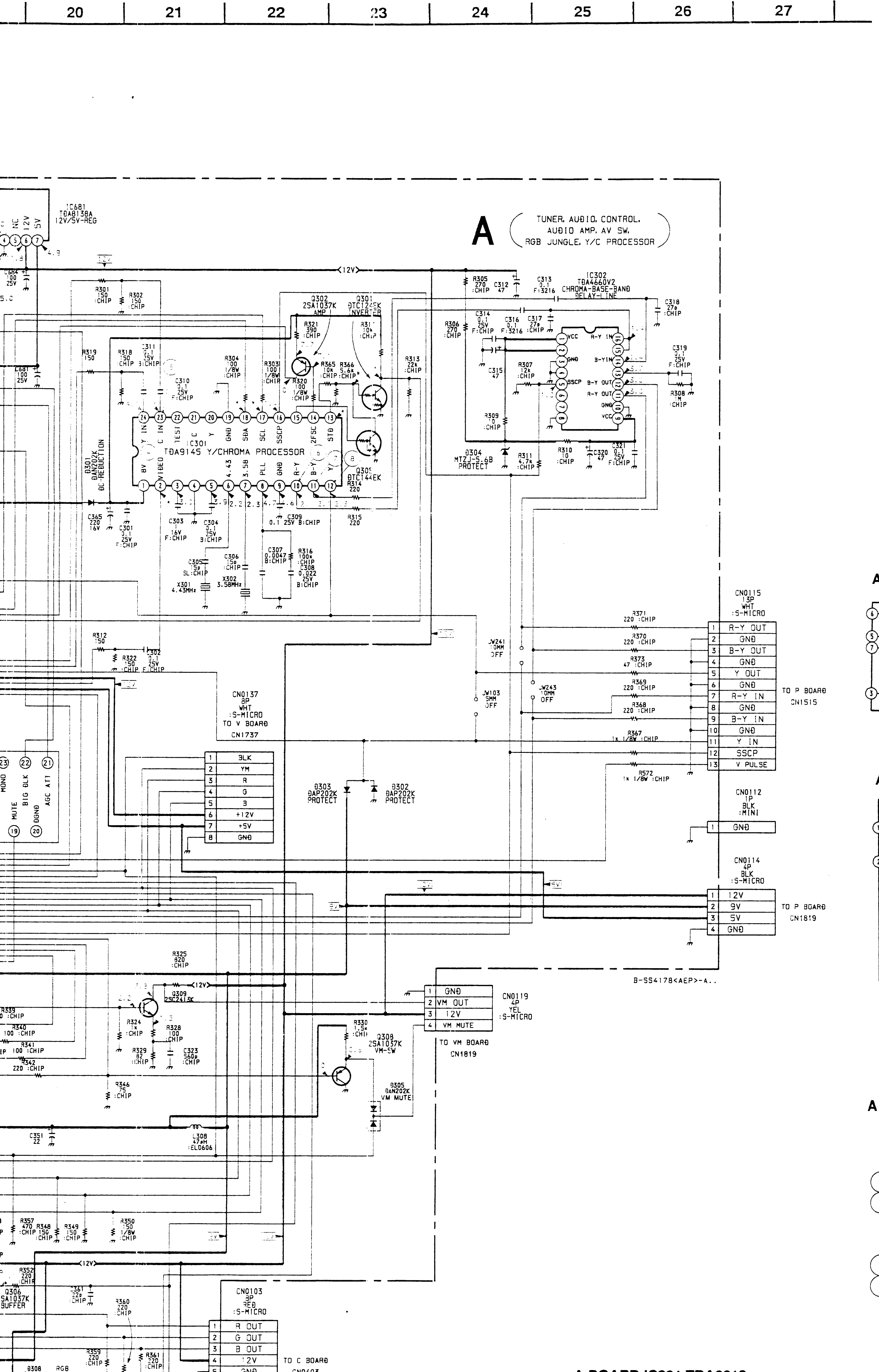
18
19
20
21
CN0108 3P YEL :S-MICRO TO H1 BOARD CN1008
HP L OUT
GND
HP R OUT
CN0104 7P RED :S-MICRO TO B BOARD CN0504
33V
15.5V
GND
GND
7.5V
STD-BY
SW15.5
TO IF BOARD CN1, CN2
Q102 DTC124EK IVID INVERTER
Q103 DTC114EK
IC202 TDA2822M HEADPHONE-AMP
Q681 MTZJ-3.3 PROTECT
Q683 2SD774 5V-REG
D682 MTZJ-5.6B 5V-REG
IC683 MC7809CT 9V-REG
Q071 DTA124EK STBY-INVERTER
D205 DA116
Q203 2SC2412K H-PULSE-AMP
Q610 2SB734 7.5V-SW
Q207 2SC2412K
Q611 DTC114EK 7.5-SW-PRIVE
IC681 TDA8138A 12V/5V-REG
IC684 MC7809CT 9V-REG
CN0102 10P BLK :BTOB-P TO B1 BOARD CN302
CN0120
5V
GND
9V
SCL
SDA
GND
R OUT
L OUT
R IN
L IN
C IN
AGND
Y IN
PAL/NT
2FSC
DGND
SSCP
VIDEO
IC201 TDA6612 STEREO-DECODER SOUND-CONTROLLER
IC072 X24C16P NVM
D068 DAP202K PROTECT
D079 MTZJ5.6B PROTECT
D078 MTZJ5.6B PROTECT
D077 DAN202K PROTECT I2C PROT
D301 DAN202K DC-REDUCTION
Q403 2SC2412K VIDEO-BUFFER
Q404 2SC2412K VIDEO BUFFER
CN0116 4P WHT :S-MICRO TO P BOARD CN1516
V3
GND
SCL
SDA
CN0113 40P WHT :BTOB-S TO M BOARD CN1413
STBY
SSCP
DGND
12V
5V
TEXT BLK
5V STBY
H SYNC
LC
H PULSE
VLC
FH
SYNC IN
V S/S
V PULSE
IK
V OFF
CS
AFT
TV ID
MONO
BIG BLK
AGC ATT
MUTE
ABL
BLK
COR
SCART 2
SCART 3
MON 1
MON 2
MON 3
IC251 TDA2052 MAIN-AUDIO-AMP
IC261 TDA2052 MAIN-AUDIO-AMP
Q205 2SA1037K MUTE-SW
Q206 2SA1037K DC LEVEL-INTERFACE
Q204 2SA1037K STBY-SW
Q209 2SC2412K PROTECT
D213 DAN202K PROTECT
Q582 2SA1037K VIDEO-AMP
Q581 2SC2412K VIDEO-AMP
Q202 2SC2412K MUTE
Q201 2SC2412K MUTE
D206 DAN202K AUDIO MUTE-1
IC304 CXA1587S RGB-JUNGLE
D311 DA204K
D571 DA204K
Q311 DTA144EK IK SW-1
Q312 DTC114EK IK SW-2
Q309 2SC1413K
Q306 2SA1037K BUFFER
D308 DA204K RGB MUTE-1
Q303 2SA1037K RGB MUTE-3
D306 DAN202K RGB MUTE-2
Q304 DTC114EK RGB MUTE-2
D381 MTZJ-7.5A V OFF MUTE
CN0111 7P BLK :S-MICRO TO K BOARD CN1311
GND
L OUT
R OUT
MUTE
+22V
-22V
CN0105 5P WHT :S-MICRO TO B BOARD CN0505
POFF
CN0110 7P WHT :S-MICRO TO J BOARD CN1210
VAR L
VAR R
SP L OUT
SP R OUT
CN0107 4P RED :S-MICRO TO B1 BOARD CN0607
VBLK
CN0106
XRAY
H PULSE
HD


10
11
12
13
14
15
16
17
18
19
20
21
22
CN0108 3P YEL :S-MICRO TO H1 BOARD CN1008
HP L OUT
GND
HP R OUT
CN0104 7P RED :S-MICRO TO B BOARD CN0504
33V
15.5V
GND
GND
7.5V
STD-BY
SW15.5
TO IF BOARD CN1, CN2
Q102 DTC124EK IVID INVERTER
IC202 TDA2822M HEADPHONE-AMP
IC683 MC7809CT 9V-REG
Q683 2SD774 5V-REG
Q681 MTZJ-3.3 PROTECT
Q682 MTZJ-5.6B 5V-REG
Q071 DTA124EK STBY-INVERTER
Q205 0A116
JR124
Q203 2SC2412K H-PULSE-AMP
Q610 2SB734 7.5V-SW
Q207 2SC2412K
Q611 DTC114EK 7.5-SW-DRIVE
IC681 TDA8138A 12V/5V-REG
IC201 TDA8412 STEREO-DECODER SOUND-CONTROLLER
FILTER OSC
SDA
SCL
+12V
L OUT HP L
R IN
R OUT HP R
RTHEB
LTHEB
Q5
LBASS
SP L
RBASS
SP R
MONO
L IN
CN0120
5V
GND
9V
SCL
SDA
GND
R OUT
L OUT
R IN
L IN
IC684 MC7809CT 9V-REG
CN0102 10P BLK 8TOB-P TO B1 BOARD CN302
C IN
AGND
Y IN
PAL/NT
2FSC
DGND
SSCP
VIDEO
IC072 X24C16P NVM
Q068 DAP202K PROTECT
Q079 MTZJ5.6B PROTECT
Q078 MTZJ5.6B PROTECT
Q077 DAN202K PROTECT I2C PROT
Q301 DAN202K DC-REDUCTION
IC301 TDA9145 Y/CHROMA PROCES
X301 4.43MHz
X302 3.58MHz
CN0137 8P WHT :S-MICRO TO V BOARD CN1737
BLK
YM
R
G
B
+12V
+5V
GND
Q403 2SC2412K VIDEO-BUFFER
Q404 2SC2412K VIDEO BUFFER
MON 1
SCART 1
MON 2
SCART 3
MON 3
CN0116 4P WHT :S-MICRO TO P BOARD CN1516
V3
GND
SCL
SDA
CN0113 40P WHT 8TOB-S TO M BOARD CN1413
SSCP
JGND
12V
5V
JGND
TEXT BLK
5V STBY
H SYNC
LC
H PULSE
5V
VIDEO
VLC
SYNC IN
FH
V S/S
SDA
V PULSE
SCL
DGND
IK
CS
V OFF
AFT
SDA
DGND
SCL
TV ID
BLK
MONO
ABL
BIG BLK
MUTE
AGC ATT
DGND
STBY
B
G
R
COR
IC304 CXA1587S RGB-JUNGLE
FH/2FH VM OUT
Y IN
R1 IN
B-Y IN
G1 IN
R-Y IN
B1 IN
H S/S
FS1
APED
V IN
IREF1
FBP IN
VCC1
XRAY
FS2
VCC2
HSW
IREF2
R2 IN
VCC3
G2 IN
VLC
B2 IN
GND2
R S/H
HVCO
G S/H
AFC
B S/H
FH
HD OUT
IK IN
V S/S
R OUT
VTIM
G OUT
SSCP
B OUT
SCL
VBLK
SDA
ABL IN
V OFF ABL FIL
Q582 2SA1037K VIDEO-AMP
Q581 2SC2412K VIDEO-AMP
Q571 0A204K
Q311 DA204K
Q309 2SC2413K
Q312 DTC114EK IK SW-2
Q311 DTC114EK IK SW-1
Q306 2SA1037K BUFFER
Q308 DA204K RGB MUTE-1
Q303 2SA1037K
Q307 DAN202K
Q381 MTZJ-7.5A V OFF MUTE
Q304 DTC114EK RGB MUTE-2
CN0103 8P RED :S-MICRO
R OUT
G OUT
B OUT
12V
GND
IK
GND
GND
IC251 TDA2052 MAIN-AUDIO-AMP
OUT
+22V
MUTE
-22V
REF
-IN
+IN
Q205 2SA1037K MUTO-SW
Q206 2SA1037K DC LEVEL-INTERFACE
IC261 TDA2052 MAIN-AUDIO-AMP
Q204 2SA1037K STBY-SW
Q208 1SS133
Q207 MTZJ-13C
Q209 2SC2412K MUTO-SW
Q210 1SS133 PROTECT
Q213 DAN202K PROTECT
Q202 2SC2412K MUTE
Q201 2SC2412K MUTE
Q206 DAN202K AUDIO MUTE-1
CN0105 5P WHT :S-MICRO TO J BOARD CN0505
GND
L OUT
R OUT
MUTE
+22V
-22V
GND
PUFF
CN0110 7P :S-MICRO TO SPEAKER CN1210
VAR L
GND
VAR R
GND
SP L OUT
GND
SP R OUT
CN0107 4P RED :S-MICRO TO B1 BOARD CN0607
SDA
SCL
GND
VBLK
CN0106
XRAY
H PULSE
HD
ABL


20
21
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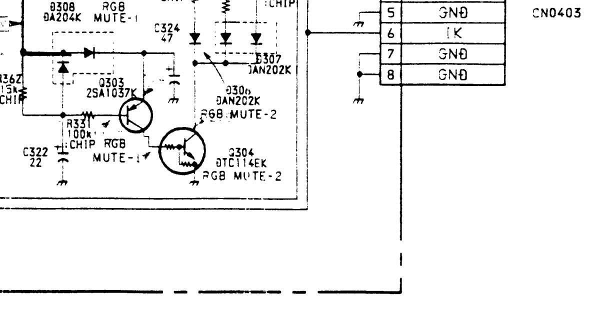
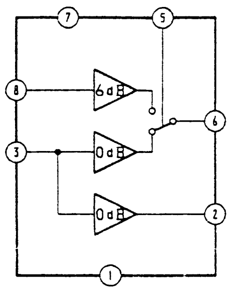
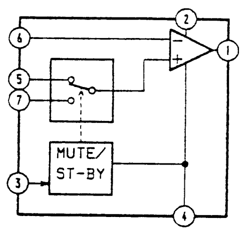
A
TUNER, AUDIO, CONTROL, AUDIO AMP, AV SW, RGB JUNGLE, Y/C PROCESSOR
IC681 TDA8138A 12V/5V-REG
IC301 TDA9145 Y/CHROMA PROCESSOR
IC302 TDA4660V2 CHROMA-BASE-BAND DELAY-LINE
Q302 2SA1037K AMP
Q301 DTC124EK INVERTER
Q305 DTC144EK
D301 DAN202K DC-REDUCTION
D304 MTZJ-5.6B PROTECT
X301 4.43MHz
X302 3.58MHz
CN0115 13P WHT :S-MICRO
R-Y OUT
GND
B-Y OUT
GND
Y OUT
GND
R-Y IN
GND
B-Y IN
GND
Y IN
SSCP
V PULSE
TO P BOARD CN1515
CN0137 8P WHT :S-MICRO TO V BOARD CN1737
BLK
YM
R
G
B
+12V
+5V
GND
D303 DAP202K PROTECT
D302 DAP202K PROTECT
CN0112 1P BLK :MINI
GND
CN0114 4P BLK :S-MICRO
12V
9V
5V
GND
TO P BOARD CN1819
B-SS4178<AEP>-A..
Q309 2SC2413K
CN0119 4P YEL :S-MICRO
GND
VM OUT
12V
VM MUTE
TO VM BOARD CN1819
Q308 2SA1037K VM-SW
D305 DAN202K VM MUTE
L308 47μH :EL0606
MONO
MUTE
BIG BLK
DGND
AGC ATT


Q306 2SA1037K BUFFER
CN0103 8P RED :S-MICRO
R OUT
G OUT
B OUT
12V
GND
YK
GND
GND
TO C BOARD CN0403
D308 DA204K RGB MUTE-1
Q303 2SA1037K RGB MUTE-1
D307 DAN202K
D30n DAN202K RGB MUTE-2
Q304 DTC114EK RGB MUTE-2

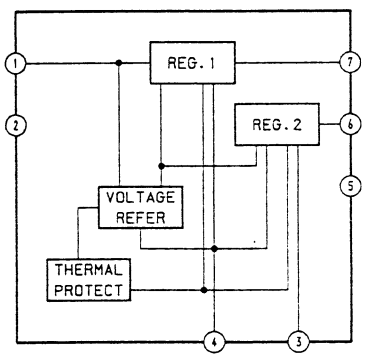
A BOARD IC402 TEA2114



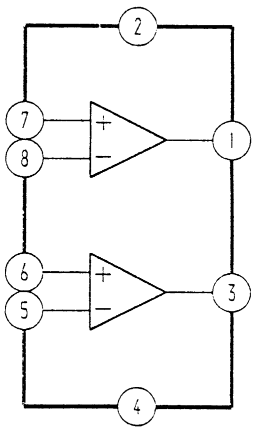
A BOARD IC251/ 261 TDA2052



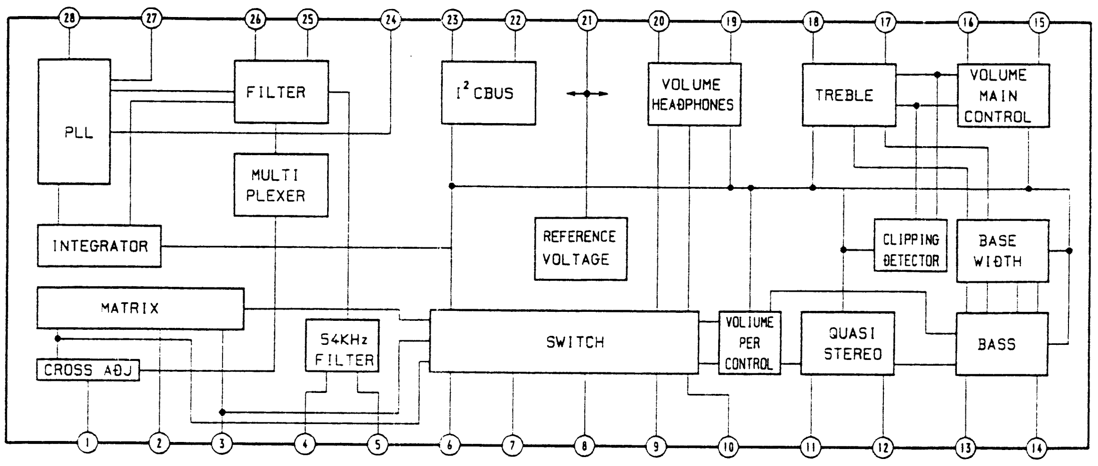
A BOARD IC681 TDA8138A


REG. 1
REG. 2
VOLTAGE REFER
THERMAL PROTECT

A BOARD IC202 TDA2822M

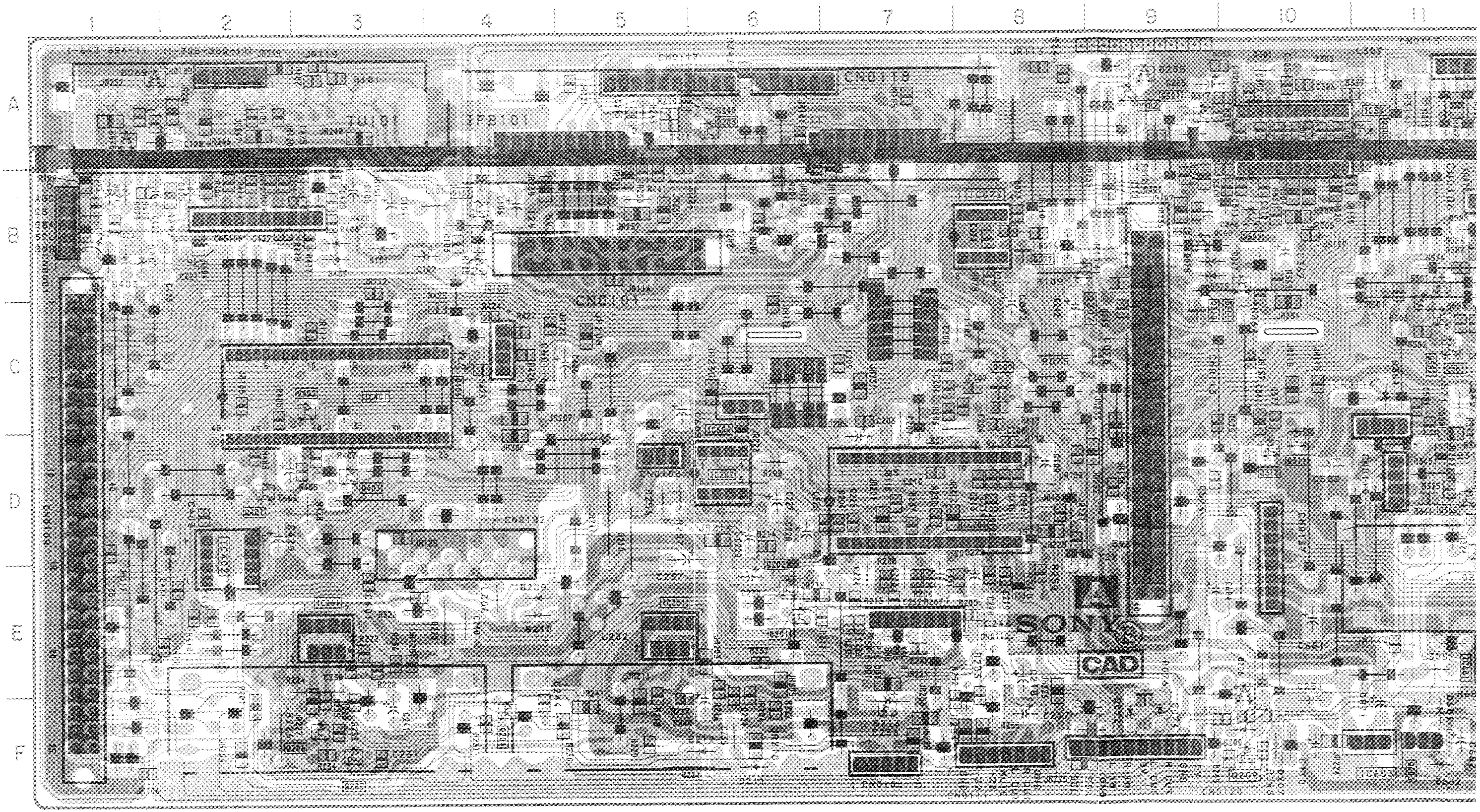


A BOARD IC201 TDA6612


PLL
FILTER
MULTI PLEXER
I²CBUS
VOLUME HEADPHONES
TREBLE
VOLUME MAIN CONTROL
INTEGRATOR
REFERENCE VOLTAGE
CLIPPING DETECTOR
BASE WIDTH
MATRIX
54KHz FILTER
SWITCH
VOLUME PER CONTROL
QUASI STEREO
BASS
CROSS ADJ

A [A/V PROCESSOR, Y/C JUNGLE, RGB OUTPUT, A/V SWITCH]

— A Board —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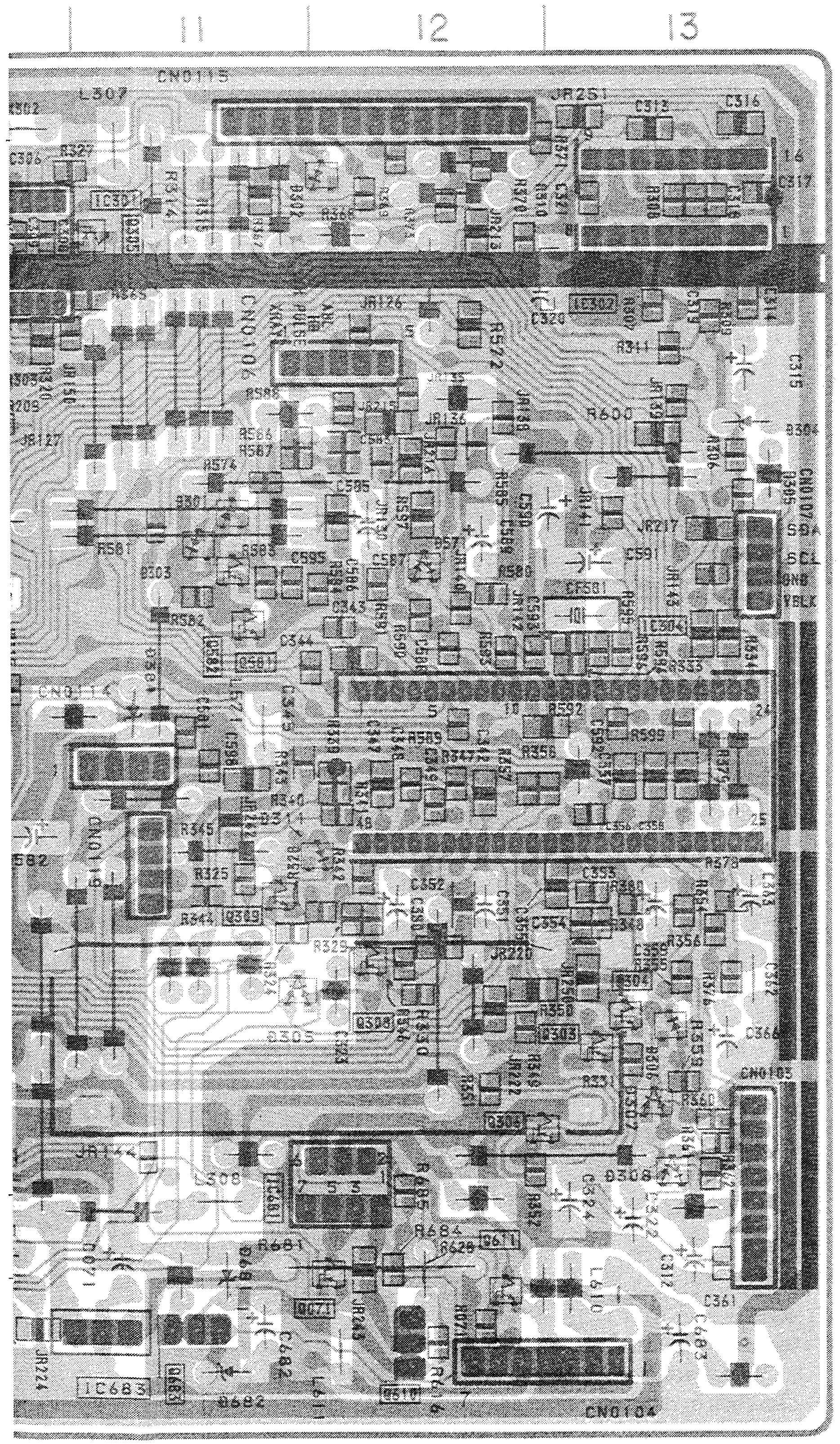
10
11
A
B
C
D
E
F
1-642-994-11
(1-705-280-11)
TU101
IFB101
CN0117
CN0118
CN0101
CN0102
CN0108
CN0109
CN0001
CN0103
CN0111
CN0120
CN0115
IC401
IC402
IC261
IC251
IC202
IC072
IC201
IC683
AGC
CS
SDA
SCL
GND
12V
5V
SONY
CAD
A


11
12
13
CN0115
CN0106
CN0107
CN0103
CN0104
IC301
IC302
IC681
IC683

— A Board —

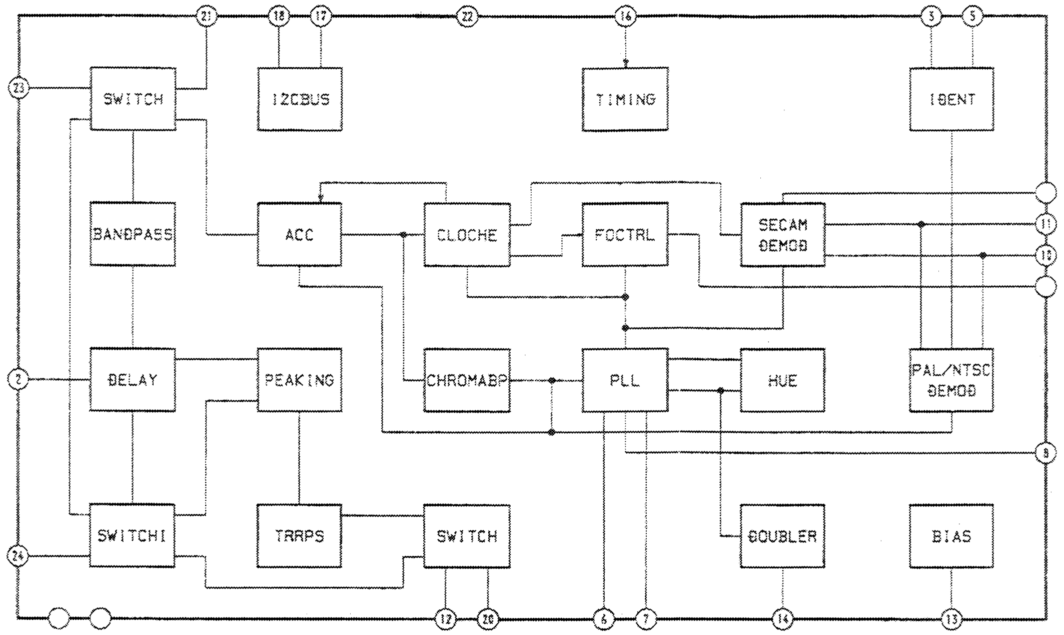
IC	
IC072	B-8
IC201	D-7
IC202	D-6
IC251	E-5
IC261	E-3
IC301	A-10
IC302	A-13
IC304	C-12
IC401	C-3
IC402	D-2
IC681	E-12
IC683	F-11
IC684	C-6

TRANSISTOR	
Q701	F-12
Q101	B-4
Q102	A-9
Q102	B-4
Q201	E-6
Q202	E-6
Q203	A-6
Q204	F-4
Q205	F-3
Q206	F-3
Q207	C-9
Q208	F-10
Q209	A-9
Q301	A-10
Q302	E-13
Q303	E-13
Q304	E-12
Q306	D-12
Q308	D-11
Q309	D-10
Q311	D-10
Q312	D-2
Q401	C-3
Q402	D-3
Q403	C-4
Q404	C-11
Q581	C-11
Q610	F-12
Q611	F-12
Q683	F-11

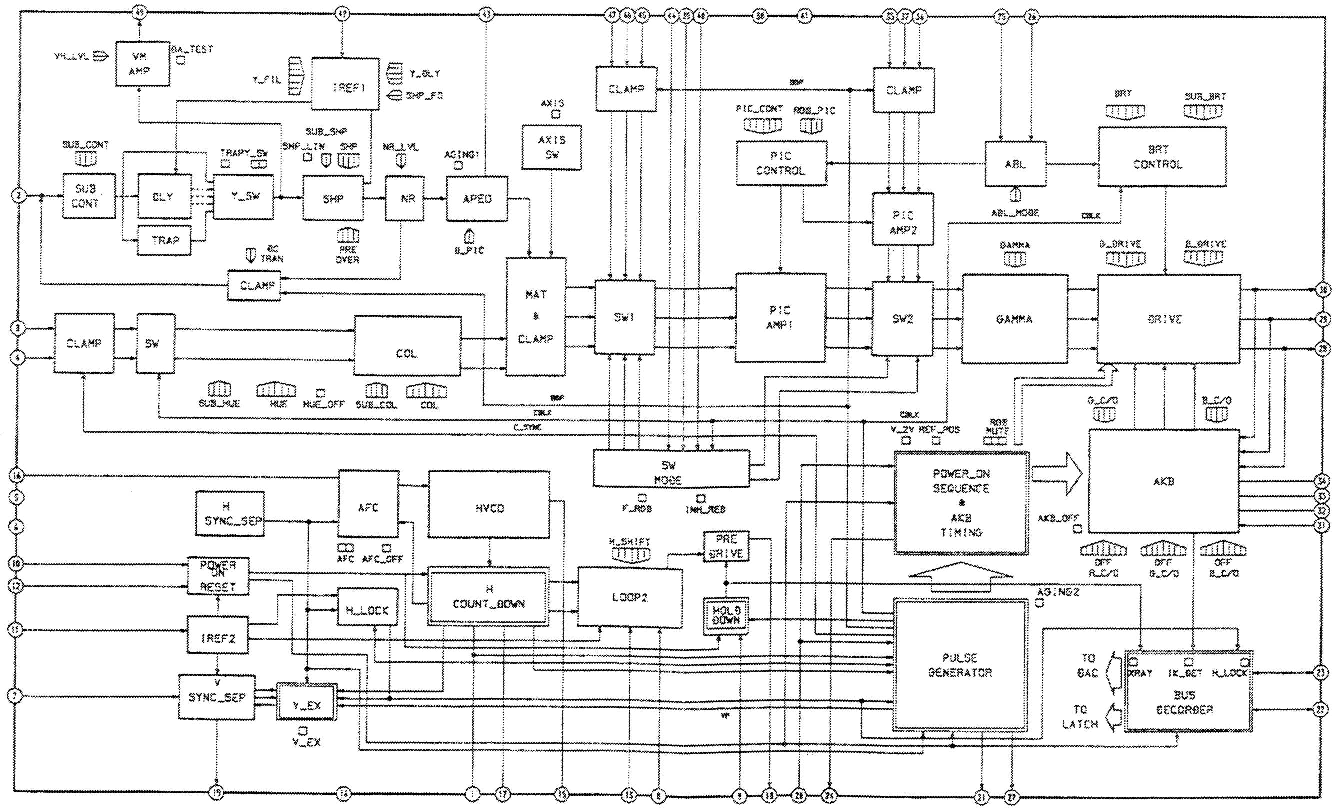
DIODE	
D068	B-9
D069	A-1
D071	B-1
D073	B-1
D075	A-1
D077	B-10
D078	B-9
D079	B-9
D101	B-3
D205	A-9
D206	E-10
D207	F-10
D208	F-10
D209	E-4
D210	E-4
D211	F-6
D212	F-6
D213	F-7
D301	B-11
D302	A-12
D303	C-11
D304	B-13
D305	D-11
D306	E-13
D307	E-13
D308	E-13
D311	D-11
D381	C-11
D401	B-1
D403	B-1
D405	B-2
D406	B-3
D407	B-3
D571	C-12
D681	F-11
D682	F-11

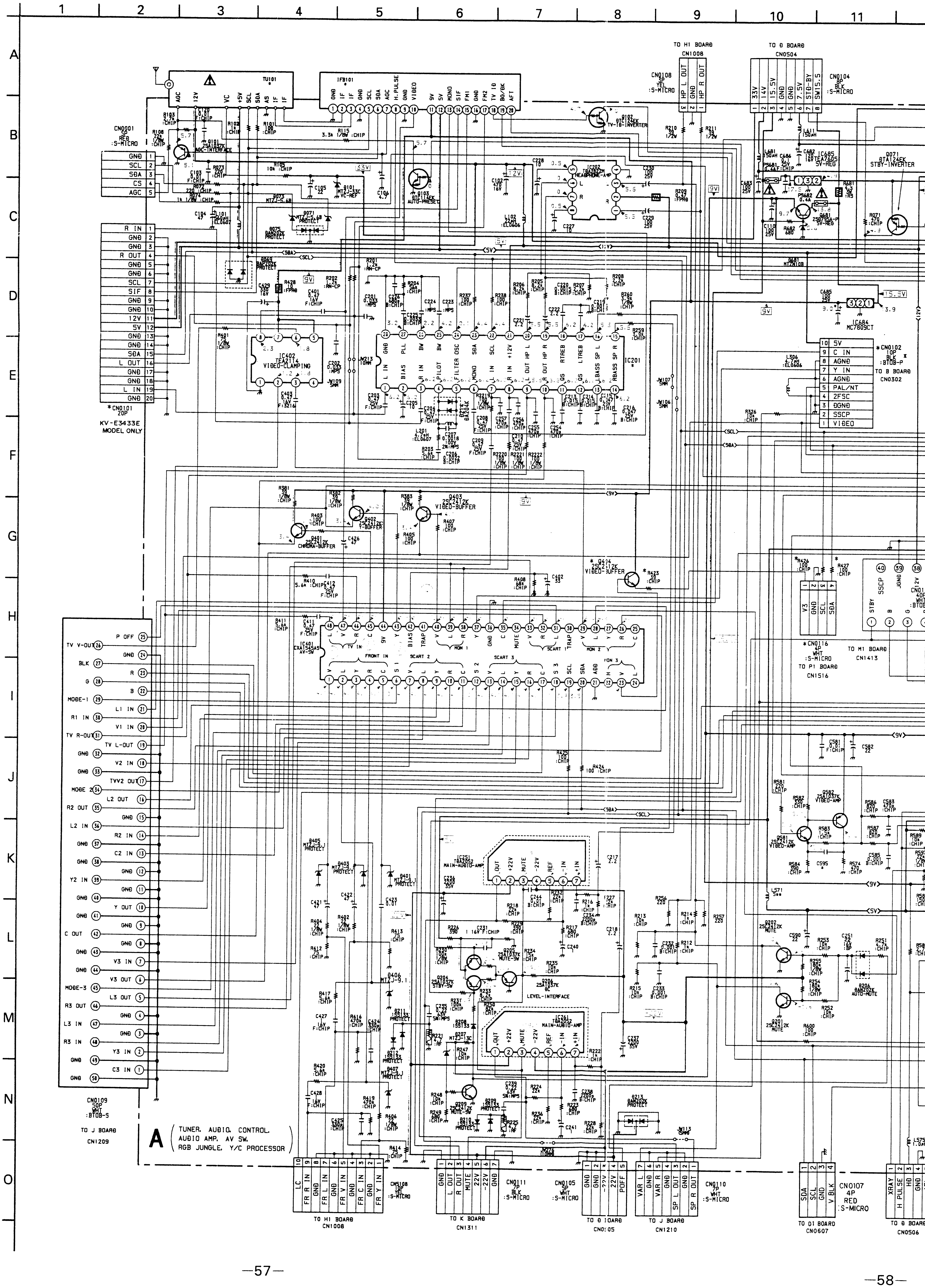
- ▨ : Pattern from the side which enables seeing.
- ▨ : Pattern of the rear side.

A BOARD IC301 TDA9145


SWITCH
I2CBUS
TIMING
IDENT
BANDPASS
ACC
CLOCHE
FCCTRL
SECAM DEMOD
DELAY
PEAKING
CHROMABP
PLL
HUE
PAL/NTSC DEMOD
SWITCH1
TRAPS
SWITCH
DOUBLER
BIAS

A BOARD IC304 CXA1587S


VM AMP
IREF1
CLAMP
AXIS SW
PIC CONTROL
ABL
BRT CONTROL
SUB CONT
DLY
Y_SW
SHP
NR
APED
TRAP
PIC AMP2
MAT & CLAMP
SW1
PIC AMP1
SW2
GAMMA
DRIVE
CLAMP
SW
COL
SW MODE
POWER_ON SEQUENCE & AKB TIMING
AKB
H SYNC_SEP
AFC
HVCO
POWER ON RESET
H_LOCK
H COUNT_DOWN
LOOP2
PRE DRIVE
HOLD DOWN
IREF2
PULSE GENERATOR
BUS DECODER
SYNC_SEP
V_EX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A
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D
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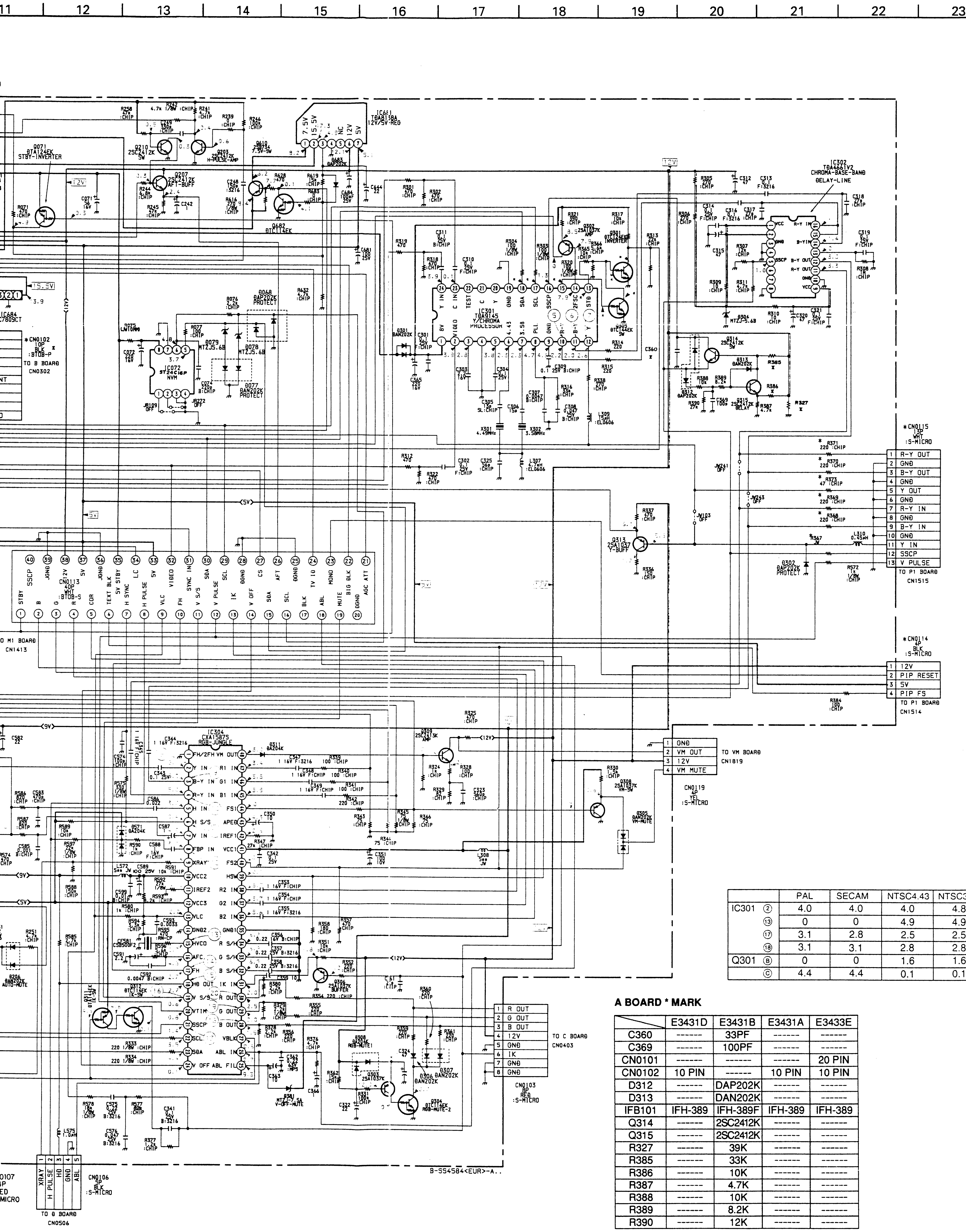
H
I
J
K
L
M
N
O
TU101
IFB101
AGC
12V
VC
+5V
SCL
SDA
AS
IF
GND
H.PULSE
VIDEO
9V
5V
MONO
SIF
FM1
FM2
TV IO
BO/BK
AFT
CN0001
5P
RED
:S-MICRO
GND
SCL
SDA
CS
AGC
Q101
2SA1037K
AGC-INTERFACE
Q103
DTC114EK
AUTO-PRESET
D101
MTZJ-33C
VC-REF
D071
MTZJ-5.6B
PROTECT
D075
BAM202K
PROTECT
D069
BAM202K
PROTECT
Q102
DTC124EK
TV-TB-INVERTER
IC202
TA8227M
HEADPHONE-AMP
TO H1 BOARD
CN1008
CN0108
3P
YEL
:S-MICRO
HP L OUT
GND
HP R OUT
TO D BOARD
CN0504
33V
14V
15.5V
GND
7.5V
STD-BY
SW15.5
CN0104
8P
BLK
:S-MICRO
IC685
TEA7605
5V-REG
Q071
DTA124EK
STBY-INVERTER
Q681
2SD1616A-P
5V-REG
D681
MTZN10B
IC684
MC7809CT
CN0101
20P
R IN
GND
R OUT
SIF
12V
5V
L OUT
L IN
KV-E3433E
MODEL ONLY
IC402
TEA2114
VIDEO-CLAMPING
IC201
GND
PLL
BW
PILOT
FILTER OSC
SDA
SCL
+12V
OUT HP L
OUT HP R
ATREB
LTREB
BASS SP L
RBASS SP R
L IN
BIAS
R IN
MONO
QS
CN0102
10P
BLK
:BTOB-P
TO B BOARD
CN0302
C IN
AGND
Y IN
PAL/NT
2FSC
DGND
SSCP
VIDEO
Q401
2SC2412K
CHROMA-BUFFER
Q402
2SC2412K
V-BUFFER
Q403
2SC2412K
VIDEO-BUFFER
Q414
2SC2412K
VIDEO-BUFFER
IC401
CXA1545AS
AV-SW
TV IN
FRONT IN
SCART 2
SCART 3
SCART 1
MON 1
MON 2
MON 3
MUTE
TRAP
CN0116
4P
WHT
:S-MICRO
TO P1 BOARD
CN1516
V3
SSCP
STBY
TO M1 BOARD
CN1413
CN0109
50P
WHT
:BTOB-S
TO J BOARD
CN1209
P OFF
TV V-OUT
BLK
MODE-1
R1 IN
V1 IN
TV R-OUT
TV L-OUT
V2 IN
TVV2 OUT
MODE 2
L2 OUT
R2 OUT
L2 IN
R2 IN
C2 IN
Y2 IN
Y OUT
C OUT
V3 IN
V3 OUT
MODE-3
L3 OUT
R3 OUT
L3 IN
R3 IN
Y3 IN
C3 IN
L1 IN
IC251
TDA7052
MAIN-AUDIO-AMP
IC261
TDA7052
MAIN-AUDIO-AMP
OUT
+22V
MUTE
-22V
REF
-IN
+IN
Q204
2SA1037K
STBY-SW
Q205
2SA1037K
MUTE-SW
Q206
2SA1037K
LEVEL-INTERFACE
Q209
2SC2412K
MUTE-SW
D207
MTZJ-13C
D208
1SS133
D210
1SS133
PROTECT
D213
BAM202K
PROTECT
D405
MTZJ-9.1
PROTECT
D403
MTZJ-9.1
PROTECT
D401
MTZJ-9.1
PROTECT
D406
MTZJ-9.1
D411
1SS133
PROTECT
D412
1SS133
PROTECT
D407
MTZJ-9.1
PROTECT
Q581
2SC2412K
VIDEO-AMP
Q582
2SA1037K
VIDEO-AMP
Q202
2SC2412K
MUTE
Q201
2SC2412K
MUTE
D206
BAM202K
AUTO-MUTE
CN5108
10P
YEL
:S-MICRO
LC
FR R IN
GND
FR L IN
FR V IN
FR C IN
FR Y IN
TO H1 BOARD
CN1008
CN0111
7P
BLK
:S-MICRO
L OUT
R OUT
22V
TO K BOARD
CN1311
CN0105
5P
WHT
:S-MICRO
-22V
POFF
TO D BOARD
CN0105
CN0110
7P
WHT
:S-MICRO
VAR L
VAR R
SP L OUT
SP R OUT
TO J BOARD
CN1210
CN0107
4P
RED
:S-MICRO
V BLK
TO D1 BOARD
CN0607
XRAY
H PULSE
HD
TO B BOARD
CN0506

A (TUNER, AUDIO, CONTROL, AUDIO AMP, AV SW, RGB JUNGLE, Y/C PROCESSOR)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IC611 TDA8138A 12V/5V-REG
Q071 DTA124EK STBY-INVERTER
Q210 2SC2412K SW
Q207 2SC2412K AFT-BUFF
Q203 2SC2412K H-PULSE-AMP
Q610 2SB734 7.5V-SW
Q682 DTC114EK
IC684 L7809CT
*CN0102 10P BLK :BTOB-P TO B BOARD CN0302
IC072 ST24C16P NVM
D068 DAP202K PROTECT
D076
D077 DAN202K PROTECT
D078 MTZJ5.6B
D079 MTZJ5.6B
IC301 TDA9145 Y/CHROMA PROCESSOR
X301 4.49MHz
X302 3.58MHz
Q301 DTC124EK INVERTER
Q302 2SA1037K AMP
Q303 DTC144EK SW
IC302 TDA4661V2 CHROMA-BASE-BAND DELAY-LINE
Q314 2SC2412K SW
Q313 DAN202K
Q315 2SC2412K DELAY
D312 DAP202K
D304 MTZJ-5.6B
Q313 2SA1037 Y-BUFF
D302 DAP202K PROTECT
*CN0115 13P WHT :S-MICRO
1 R-Y OUT
2 GND
3 B-Y OUT
4 GND
5 Y OUT
6 GND
7 R-Y IN
8 GND
9 B-Y IN
10 GND
11 Y IN
12 SSCP
13 V PULSE
TO P1 BOARD CN1515
CN0113 40P WHT :BTOB-S
SSCP JGND 12V 5V JGND 5V STBY LC 5V VIDEO SYNC IN SDA SCL IK DGND CS AFT DGND TV IO MONO BIG BLK AGC ATT
STBY B G R COR TEXT BLK 5V STBY H PULSE VLC FH SYNC IN V S/S V PULSE IK V OFF SDA SCL BLK ABL MUTE DGND
TO M1 BOARD CN1413
*CN0114 4P BLK :S-MICRO
1 12V
2 PIP RESET
3 5V
4 PIP FS
TO P1 BOARD CN1514
IC304 CXA1587S RGB-JUNGLE
Q309 2SC2412K AMP
Q308 2SA1037K VM-SW
D305 DAN202K VM-MUTE
1 GND
2 VM OUT
3 12V
4 VM MUTE
TO VM BOARD CN1819
CN0119 4P YEL :S-MICRO
Q306 2SA1037K BUFFER
Q312 DTC144EK IK-SW
Q311 DTC144EK IK-SW
D206 DAP202K AUTO-MUTE
D381 MTZJ7.5A V-OFF-MUTE
D308 DAP202K RGB-MUTE1
Q303 2SA1037K
Q304 DTC144EK RGB-MUTE-2
D306 DAN202K
D307 DAN202K
1 R OUT
2 G OUT
3 B OUT
4 12V
5 GND
6 IK
7 GND
8 GND
TO C BOARD CN0403
CN0103 8P RED :S-MICRO
XRAY H PULSE HD GND ABL
TO B BOARD CN0506
CN0107 5P RED :S-MICRO
CN0106 5P BLK :S-MICRO
B-SS4584<EUR>-A..

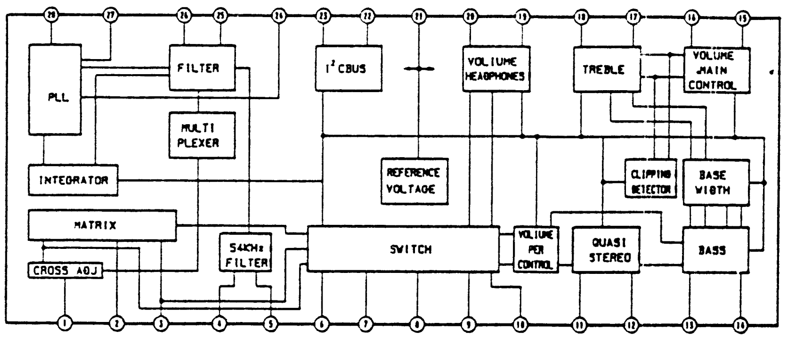
		PAL	SECAM	NTSC4.43	NTSC3
IC301	②	4.0	4.0	4.0	4.8
	⑬	0	0	4.9	4.9
	⑰	3.1	2.8	2.5	2.5
	⑱	3.1	3.1	2.8	2.8
Q301	Ⓑ	0	0	1.6	1.6
	Ⓒ	4.4	4.4	0.1	0.1

A BOARD * MARK

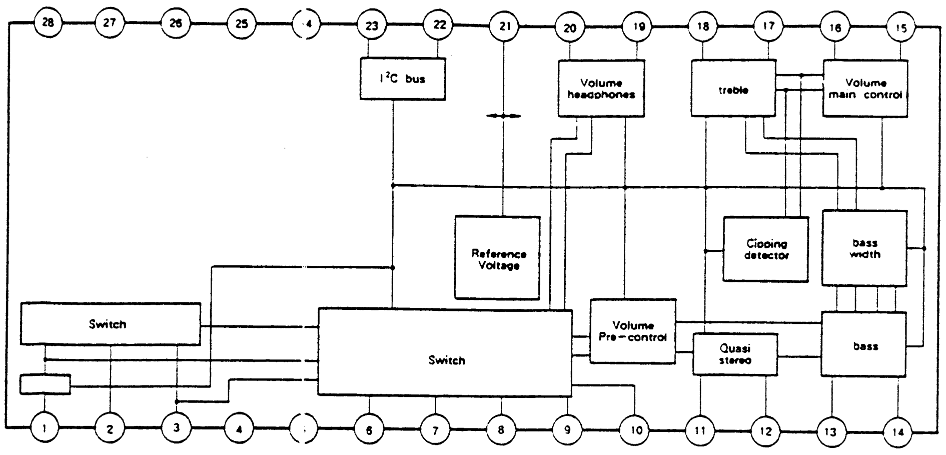
	E3431D	E3431B	E3431A	E3433E
C360	------	33PF	------	------
C369	------	100PF	------	------
CN0101	------	------	------	20 PIN
CN0102	10 PIN	------	10 PIN	10 PIN
D312	------	DAP202K	------	------
D313	------	DAN202K	------	------
IFB101	IFH-389	IFH-389F	IFH-389	IFH-389
Q314	------	2SC2412K	------	------
Q315	------	2SC2412K	------	------
R327	------	39K	------	------
R385	------	33K	------	------
R386	------	10K	------	------
R387	------	4.7K	------	------
R388	------	10K	------	------
R389	------	8.2K	------	------
R390	------	12K	------	------

------ NOT USED

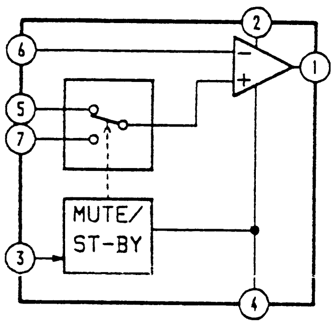
A BOARD IC201 TDA6612


PLL
FILTER
MULTI PLEXER
I²C BUS
VOLUME HEADPHONES
TREBLE
VOLUME MAIN CONTROL
INTEGRATOR
REFERENCE VOLTAGE
CLIPPING DETECTOR
BASE WIDTH
MATRIX
54KHz FILTER
CROSS ADJ
SWITCH
VOLUME PERI CONTROL
QUASI STEREO
BASS

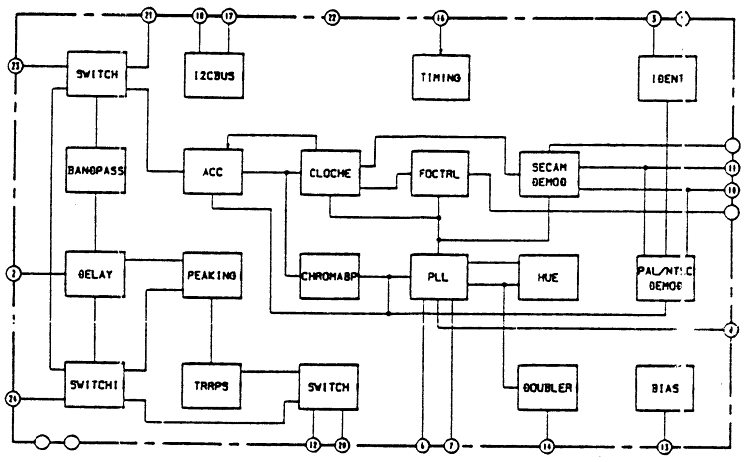
A BOARD IC201 TDA6622 (UK Model only)


I²C bus
Volume headphones
treble
Volume main control
Reference Voltage
Clipping detector
bass width
Switch
Switch
Volume Pre-control
Quasi stereo
bass

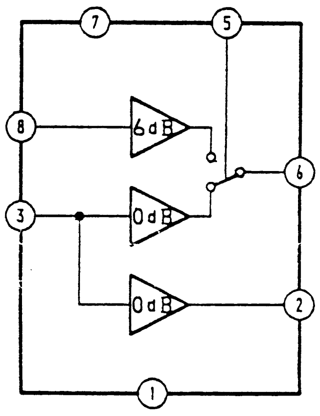
A BOARD IC251, IC261 TDA2052



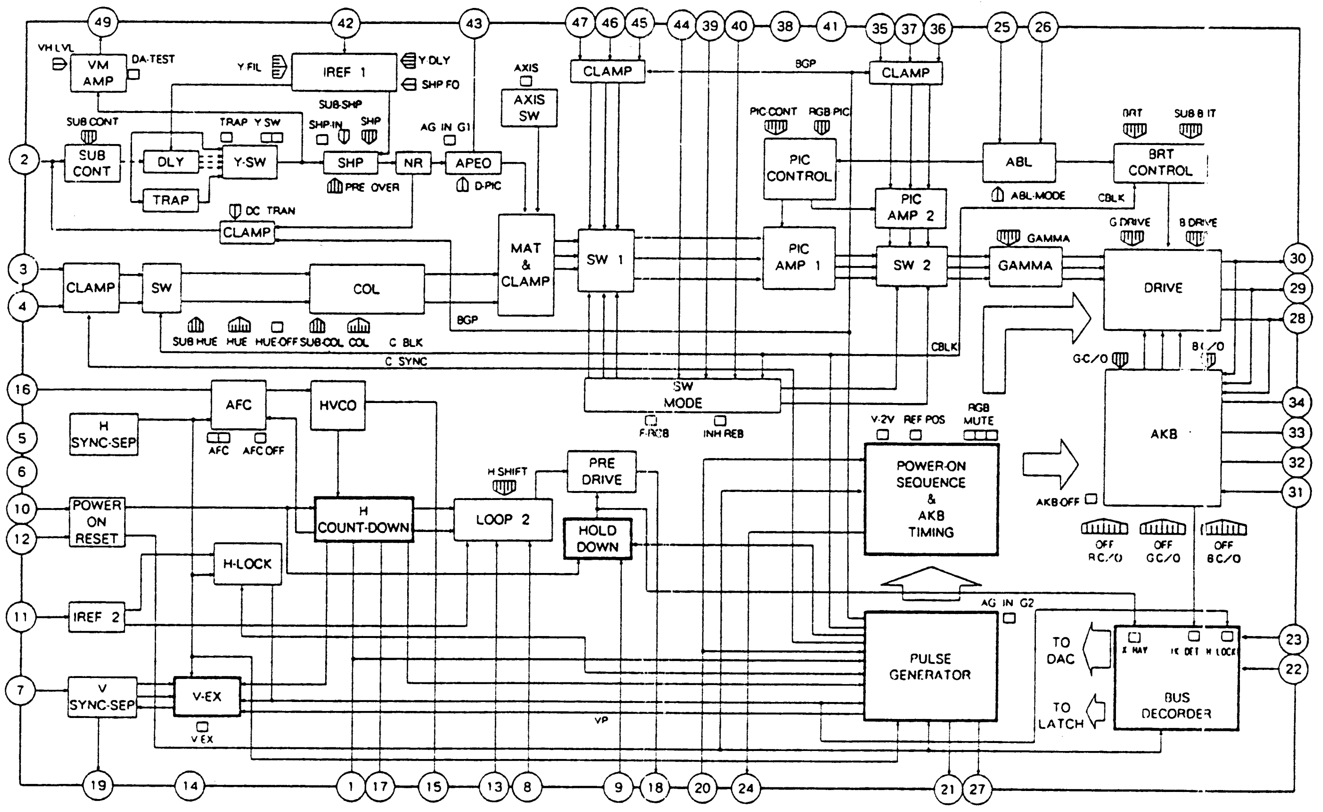
A BOARD IC301 TDA9145


SWITCH
I2CBUS
TIMING
IDENT
BANDPASS
ACC
CLOCHE
FOCTRL
SECAM DEMOD
DELAY
PEAKING
CHROMABP
PLL
HUE
PAL/NTSC DEMOD
SWITCH1
TRAPS
SWITCH
DOUBLER
BIAS

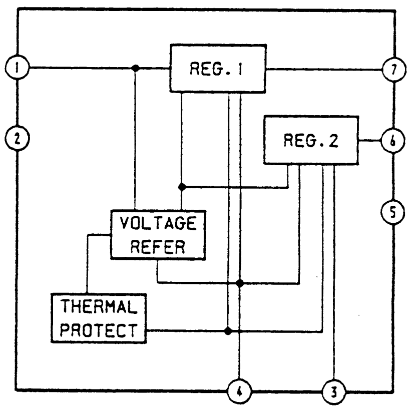
A BOARD IC402 TEA2114



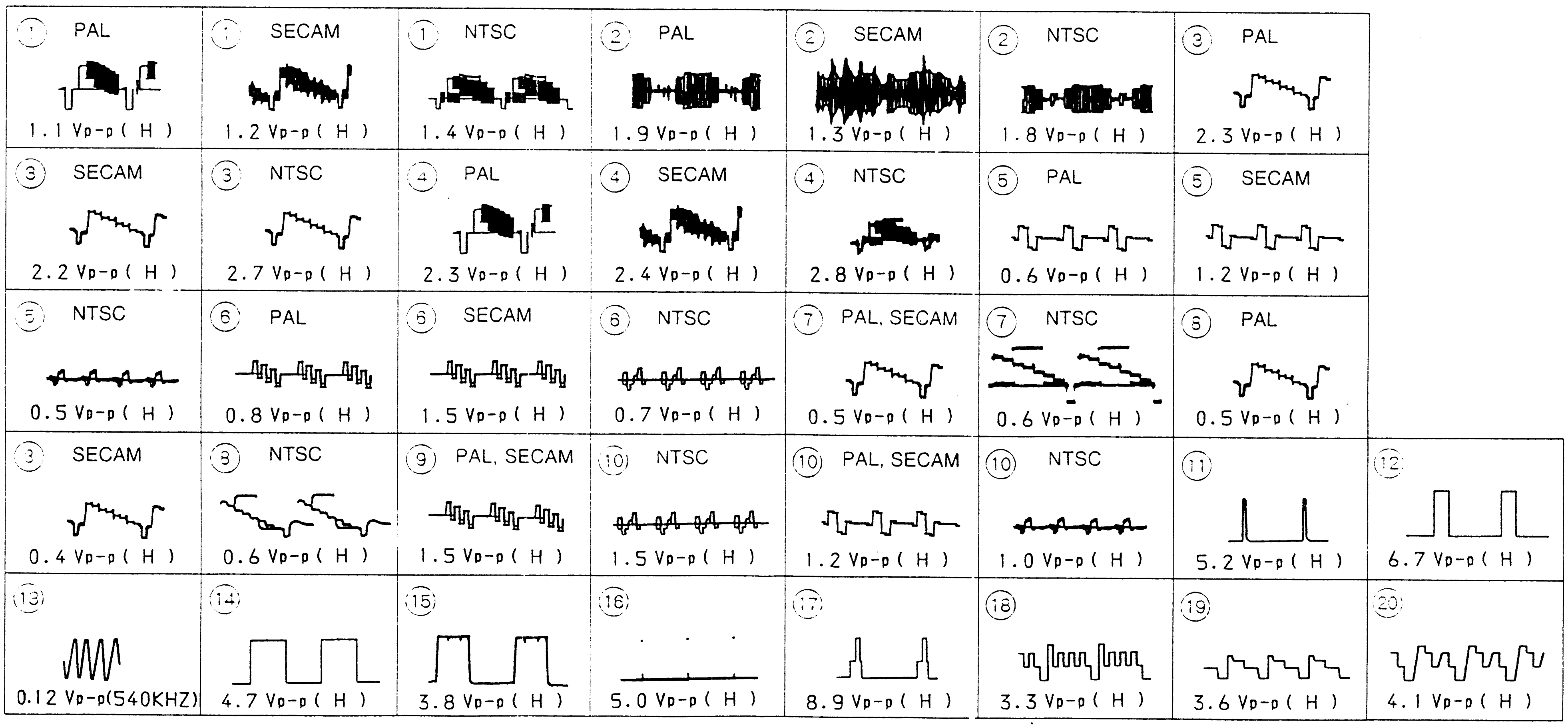
A BOARD IC304 CXA1587S

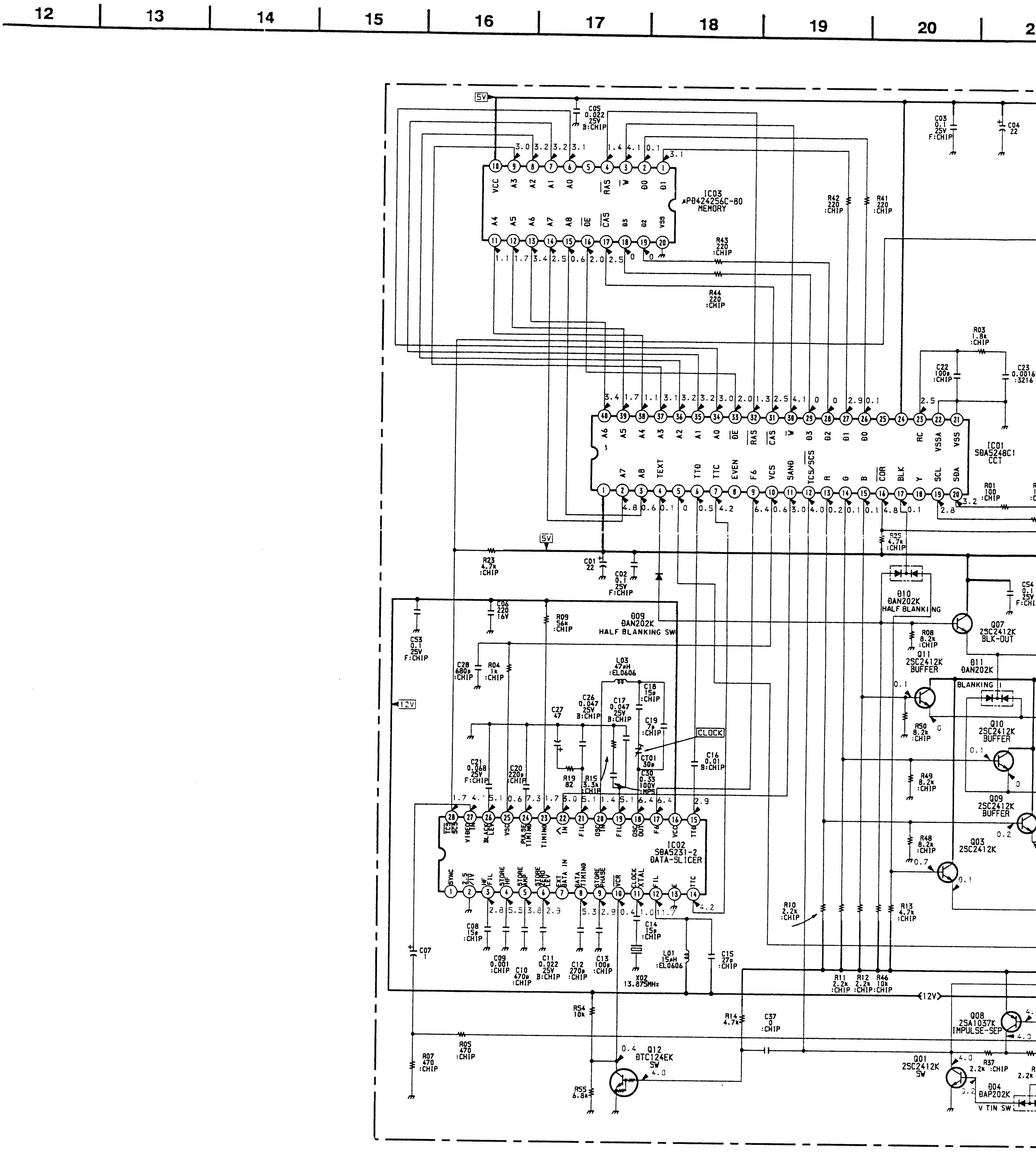

VM AMP
DA-TEST
IREF 1
Y DLY
SHP FO
AXIS SW
CLAMP
BGP
CLAMP
SUB CONT
DLY
Y-SW
SHP
NR
APEO
TRAP
CLAMP
PIC CONTROL
PIC AMP 2
ABL
BRT CONTROL
MAT & CLAMP
SW 1
PIC AMP 1
SW 2
GAMMA
DRIVE
CLAMP
SW
COL
SUB HUE HUE HUE OFF SUB COL COL C BLK
C SYNC
CBLK
SW MODE
AFC
HVCO
H SYNC SEP
PRE DRIVE
POWER-ON SEQUENCE & AKB TIMING
AKB
POWER ON RESET
H COUNT-DOWN
LOOP 2
HOLD DOWN
H-LOCK
IREF 2
PULSE GENERATOR
TO DAC
TO LATCH
BUS DECORDER
V SYNC-SEP
V-EX
VP

A BOARD IC681 TDA8138A


REG. 1
REG. 2
VOLTAGE REFER
THERMAL PROTECT

A BOARD




12
13
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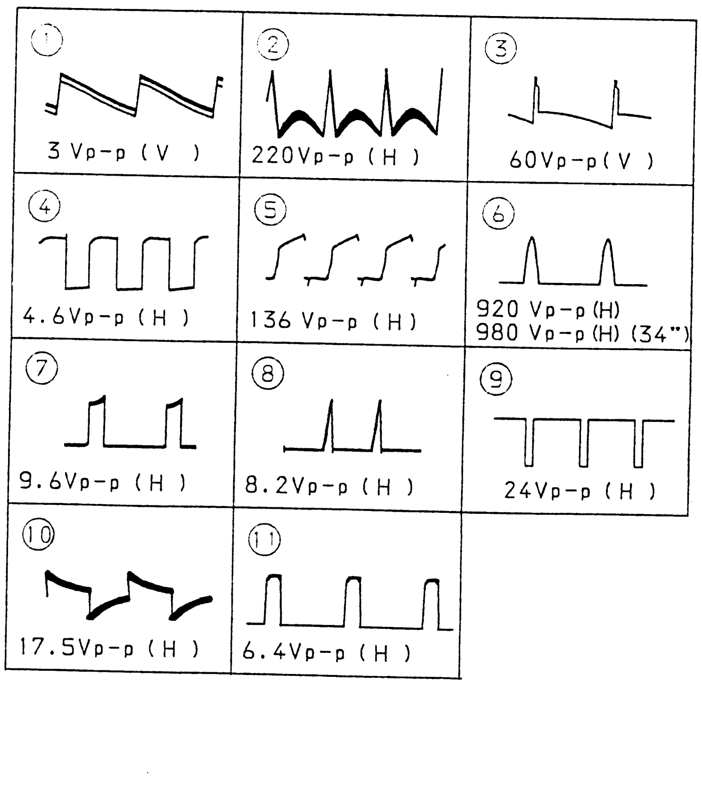
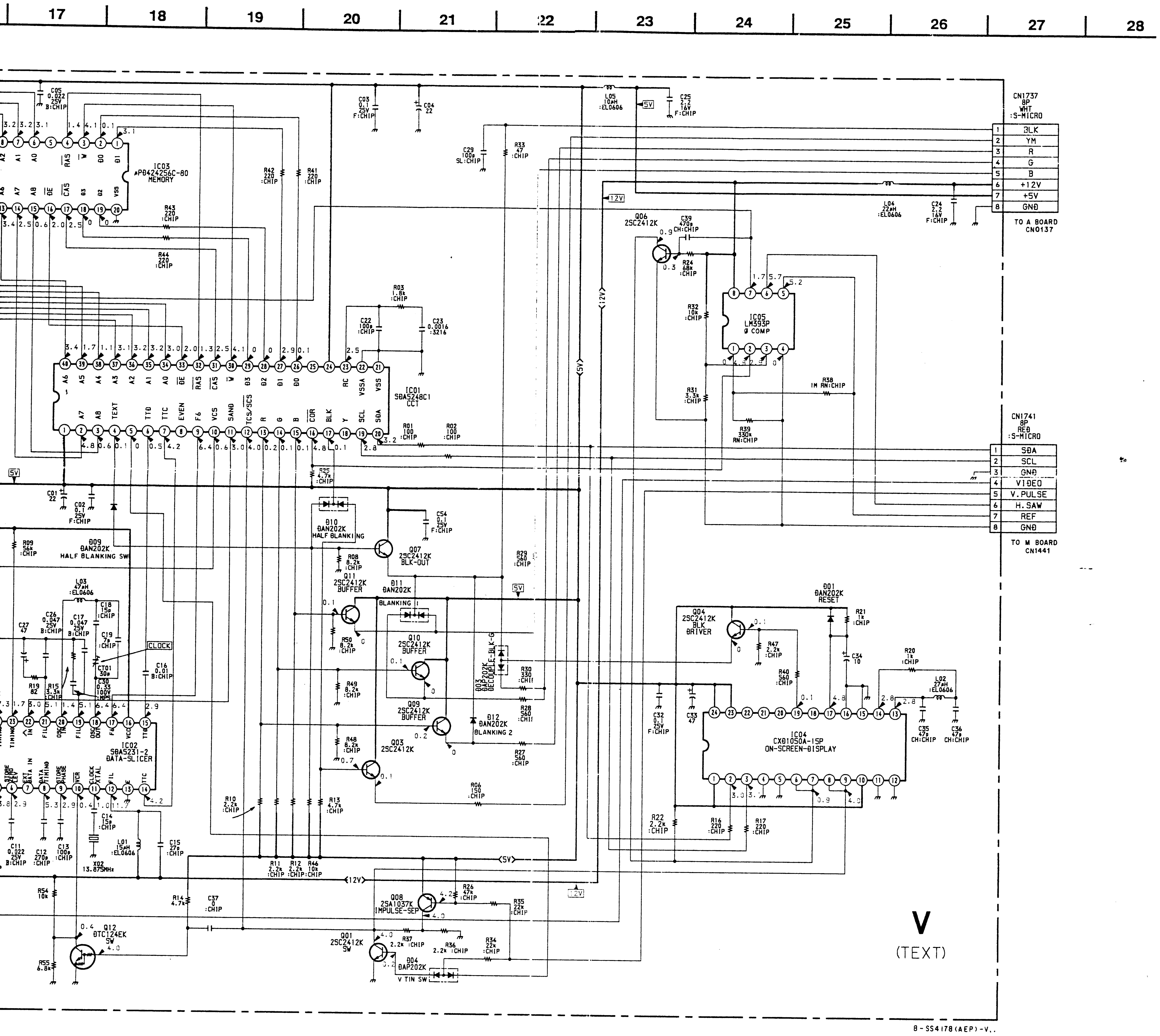
19
20
5V
12V
IC03
µPD424256C-80
MEMORY
IC01
SBA5248C1
CCT
IC02
SBA5231-2
DATA-SLICER
CLOCK
X02
13.875MHz
L03
47µH
:EL0606
L01
15µH
:EL0606
CT01
30p
D09
DAN202K
HALF BLANKING SW
D10
DAN202K
HALF BLANKING
D11
DAN202K
BLANKING
Q07
2SC2412K
BLK-OUT
Q11
2SC2412K
BUFFER
Q10
2SC2412K
BUFFER
Q09
2SC2412K
BUFFER
Q03
2SC2412K
Q08
2SA1037K
IMPULSE-SEP
Q01
2SC2412K
SW
Q12
DTC124EK
SW
D04
DAP202K
V TIN SW

D BOARD : ⁑ MARK

	KV-E2531D KV-E2531B	KV-E2931D KV-E2931B	KV-E3431D KV-E3431B
C603	0.0022 400V	0.0022 400V	—
C612	0.0056 50V	0.0068 63V	0.0068 63V
⚠ C821	0.021 1.2KV	0.021 1.2KV	1.2KV : PP
C823	0.47 50V	0.47 50V	1 50V
C824	0.0047 63V	0.0022 63V	0.0022 63V
⚠ C826	0.068 630V	0.068 630V	0.056 630V
C827	0.047 100V	0.1 100V : MPS	0.1 63V
C833	1.8 200V	2 200V	1.8 200V
C834	0.62 200V	0.82 200V	1.2 200V
C851	0.0047 400V	0.001 63V	0.001 63V
⚠ C854	330P 2KV B	560P 2KV A	330P 2KV B
C863	0.047 100V	0.047 100V	—
C866	0.001 400V	—	—
C869	0.1 100V	0.1 100V : MPS	0.1 63V
C1507	0.22 100V : MPS	0.27 100V : MPS	0.27 100V : MPS
C1513	—	—	68P 50V
CN0522	—	—	9P
D811	—	—	ERB44-06
JW304	20MM JW	—	—
JW305	20MM JW	—	—
L802	—	—	2.2MMH :EL0606
L817	HLC	HLC	HLT
R601	8.2 1W : RS	2.2 1W : RS	2.2 1W : RS
R630	2.2K 1/4W	2.2 1/4W	—
R801	6.8K : CHIP	1.5K : CHIP	1.5K : CHIP
R821	1.5K 3W : RS	1.2K 3W : RS	1.2K 3W : RS
R822	1.5K 3W : RS	1.2K 3W : RS	1.2K 3W : RS
R825	0.47 1W : RS	0.47 1W : RS	0.27 1W : RS
R834	330K : CHIP	150K : CHIP	180K : CHIP
R838	56K : CHIP	68K : CHIP	100K : CHIP
R839	1.8K : CHIP	3.6K : CHIP	3.6K : CHIP
R845	—	—	270K : CHIP
R847	100K : CHIP	82K : CHIP	150K : CHIP
R849	33 3W : RS	15 2W : RS	15 2W : RS
R864	30K : RN-CP	15K : RN-CP	150K : RN-CP
R868	33K 1/4W	15K 1/4W	8.2K 1/4W
R1502	3.9K	3.6K	3.6K
R1509	56K	47K	47K
⚠ T601	(SMT7) : RST	(SMT89) : RST	(SMT89) : RST
⚠ T801	UX-2600A2	UX-2600A2	UX-2602A3
T895	—	—	DFT

— D Board —




17
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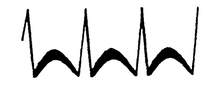
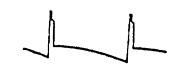
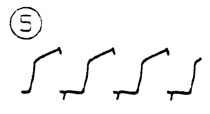
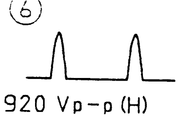
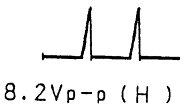
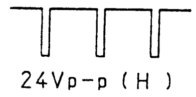
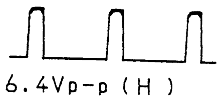
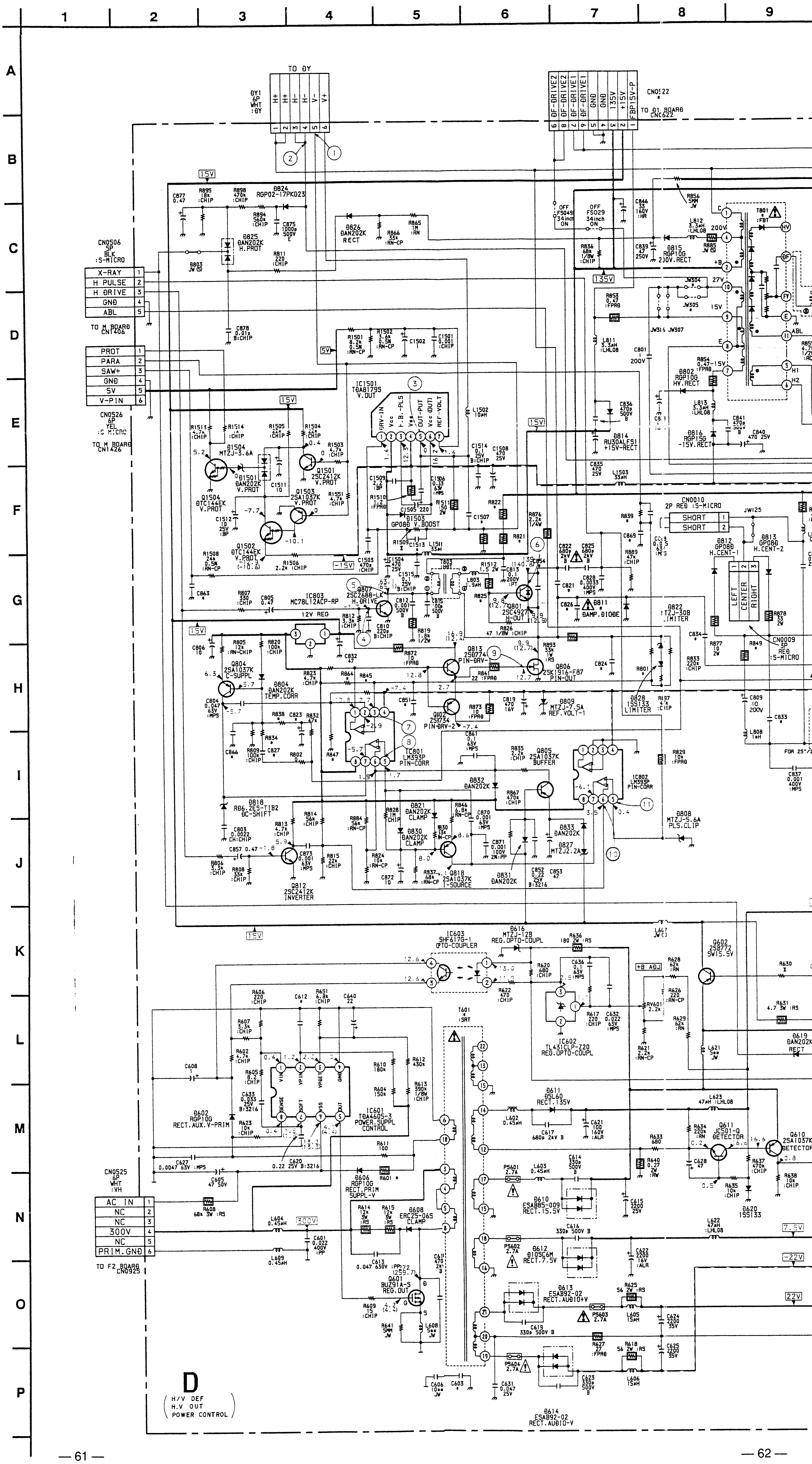
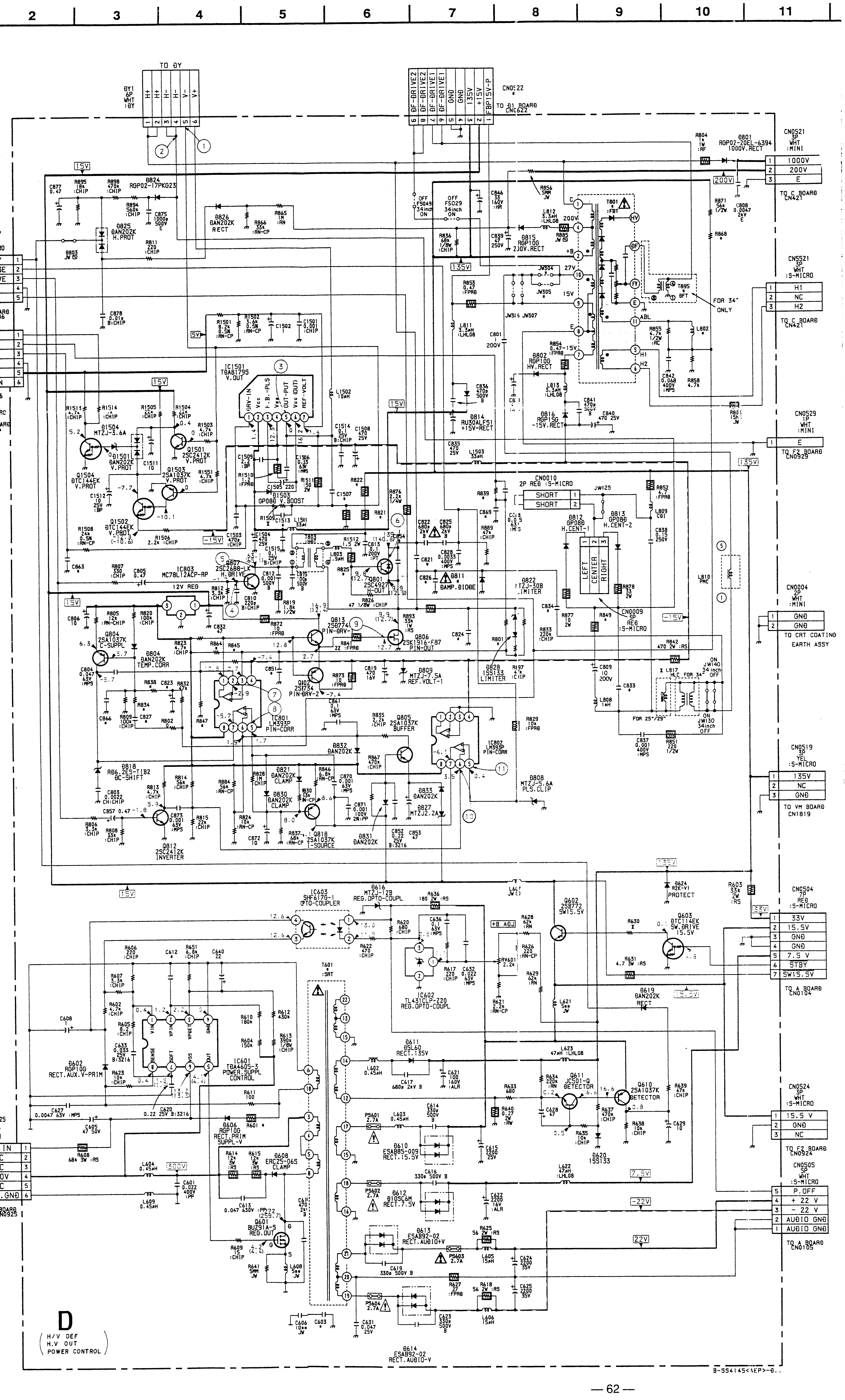
28
IC03 µPD424256C-80 MEMORY
IC01 SDA5248C1 CCT
IC02 SDA5231-2 DATA-SLICER
IC04 CX01050A-15P ON-SCREEN-DISPLAY
IC05 LM393P Ø COMP
Q06 2SC2412K
Q07 2SC2412K BLK-OUT
Q11 2SC2412K BUFFER
Q10 2SC2412K BUFFER
Q09 2SC2412K BUFFER
Q03 2SC2412K
Q04 2SC2412K BLK DRIVER
Q08 2SA1037K IMPULSE-SEP
Q01 2SC2412K SW
Q12 DTC124EK SW
D09 DAN202K HALF BLANKING SW
D10 DAN202K HALF BLANKING
D11 DAN202K BLANKING
D12 DAN202K BLANKING 2
D03 DAP202K DECOUPLE-BLK-G
D01 DAN202K RESET
D04 DAP202K V TIN SW
CLOCK
X02 13.875MHz
CT01 30p
L05 10µH :EL0606
L04 22µH :EL0606
L03 47µH :EL0606
L02 27µH :EL0606
L01 15µH :EL0606
5V
12V
CN1737 8P WHT :S-MICRO
1 BLK
2 YM
3 R
4 G
5 B
6 +12V
7 +5V
8 GND
TO A BOARD CN0137
CN1741 8P RED :S-MICRO
1 SDA
2 SCL
3 GND
4 VIDEO
5 V.PULSE
6 H.SAW
7 REF
8 GND
TO M BOARD CN1441
V
(TEXT)
8-SS4178(AEP)-V..

)	②  220Vp-p (H)	③  60Vp-p (V)
)	⑤  136 Vp-p (H)	⑥  920 Vp-p (H) 980 Vp-p (H) (34")
	⑧  8.2Vp-p (H)	⑨  24Vp-p (H)
)	⑪  6.4Vp-p (H)	

TO DY
DY1 6P WHT :DY
H+ H+ H- H- V- V+
CN0E22
TO D1 BOARD CNC622
DF-DRIVE2 DF-DRIVE2 DF-DRIVE1 DF-DRIVE1 GND GND 135V +15V FBP15V-P
CN0506 5P BLK :S-MICRO
X-RAY
H PULSE
H DRIVE
GND
ABL
TO M BOARD CN1406
PROT
PARA
SAW+
GND
5V
V-PIN
CN0526 6P YEL :S MICRO
TO M BOARD CN1426
D824 RGP02-17PKG23
D825 DAN202K H.PROT
D826 DAN202K RECT
IC1501 TDA8179S V.OUT
Q1504 DTC144EK V.PROT
Q1501 2SC2412K V.PROT
Q1503 2SA1037K V.PROT
Q1502 DTC144EK V.PROT
D1504 MTZJ-3.6A
D1501 DAN202K V.PROT
D1503 GP08D V.BOOST
IC803 MC78L12ACP-RP 12V REG
Q807 2SC2688-LK H.DRIVE
Q801 2SC4927 H-OUT
D811 DAMP.DIODE
D822 TZJ-30B LIMITER
Q804 2SA1037K C-SUPPL
D804 DAN202K TEMP.CORR
Q813 2SD774 PIN-DRV-1
Q806 2SK1916-F87 PIN-OUT
Q102 2SD734 PIN-DRV-2
D809 MTZJ-7.5A REF.VOLT-1
IC801 LM393P PIN-CORR
Q805 2SA1037K BUFFER
IC802 LM393P PIN-CORR
D832 DAN202K
D818 RD6.2ES-T1B2 DC-SHIFT
D821 DAN202K CLAMP
D830 DAN202K CLAMP
D833 DAN202K
D827 MTZJ2.2A
D808 MTZJ-5.6A PLS.CLIP
Q812 2SC2412K INVERTER
Q818 2SA1037K I-SOURCE
D831 DAN202K
D828 1SS133 LIMITER
D814 RU3OALFS1 +15V-RECT
D815 RGP10G 200V.RECT
D802 RGP10G HV.RECT
D816 RGP15G -15V.RECT
T801 :FBT
CN0010 2P RED :S-MICRO
SHORT
SHORT
D812 GP08D H.CENT-1
D813 GP08D H.CENT-2
LEFT CENTER RIGHT
CN0009 3P RED :S-MICRO
FOR 25"/27"
OFF F5049 34inch ON
OFF F5029 34inch ON
15V
5V
-15V
135V
IC603 SHF617G-1 OPTO-COUPLER
D616 MTZJ-12B REG.OPTO-COUPL
IC602 TL431CLP-Z20 REG.OPTO-COUPL
Q602 2SB772 SW15.5V
+B ADJ
RV601
IC601 TDA4605-3 POWER.SUPPL CONTROL
D602 RGP10G RECT.AUX.V-PRIM
D606 RGP10G RECT.PRIM SUPPL-V
D608 ERC25-06S CLAMP
Q601 BUZ91A-S REG.OUT
T601 :SRT
D611 D5L60 RECT.135V
D610 ESAB85-009 RECT.15.5V
D612 D10SC6M RECT.7.5V
D613 ESAB92-02 RECT.AUDIO+V
D614 ESAB92-02 RECT.AUDIO-V
D619 DAN202K RECT
Q611 JC501-Q DETECTOR
Q610 2SA1037K DETECTOR
D620 1SS133
300V
7.5V
-22V
22V
CN0525 6P WHT :VH
AC IN
NC
NC
300V
NC
PRIM.GND
TO F2 BOARD CN0925
D
H/V DEF
H.V OUT
POWER CONTROL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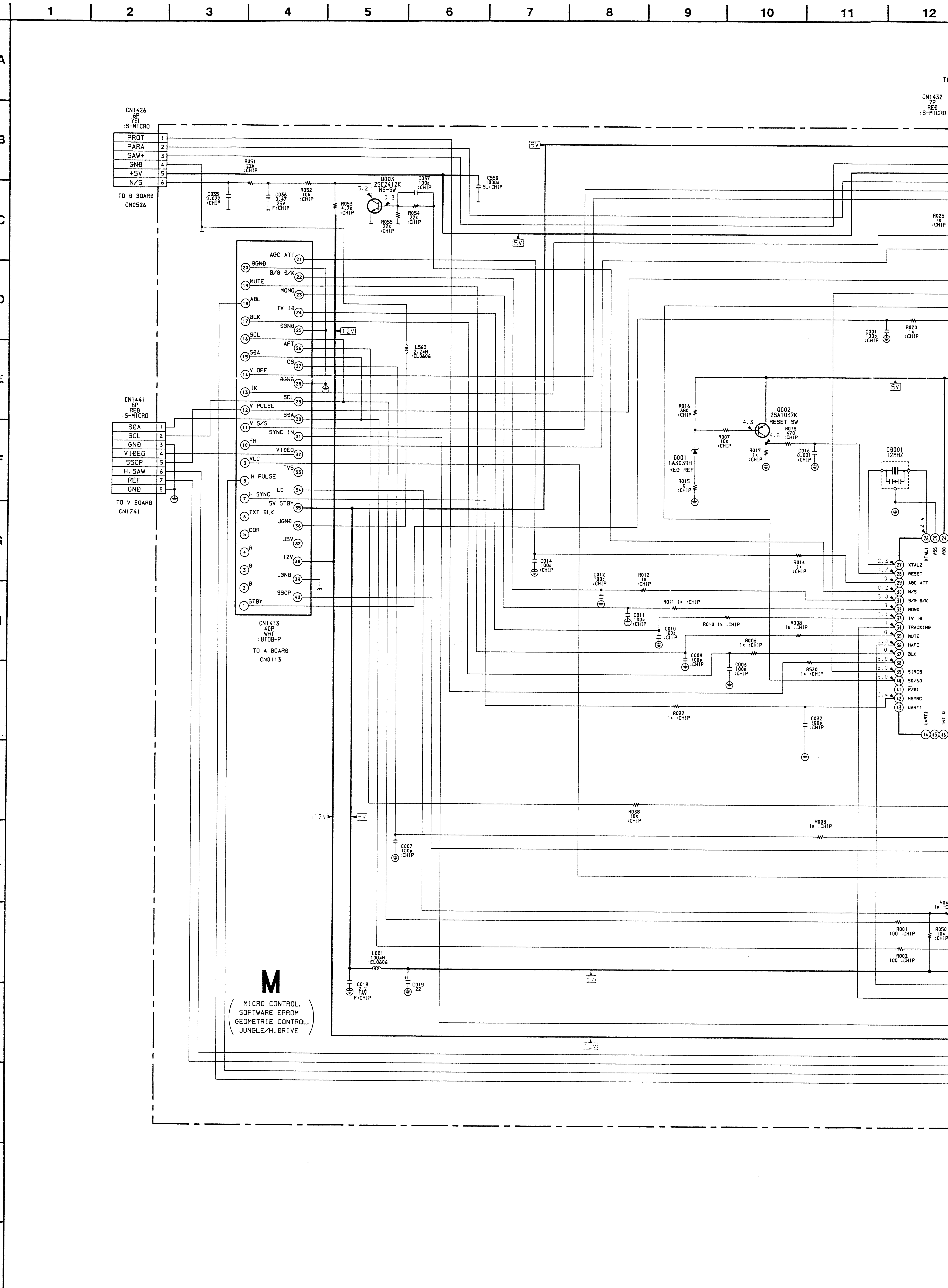
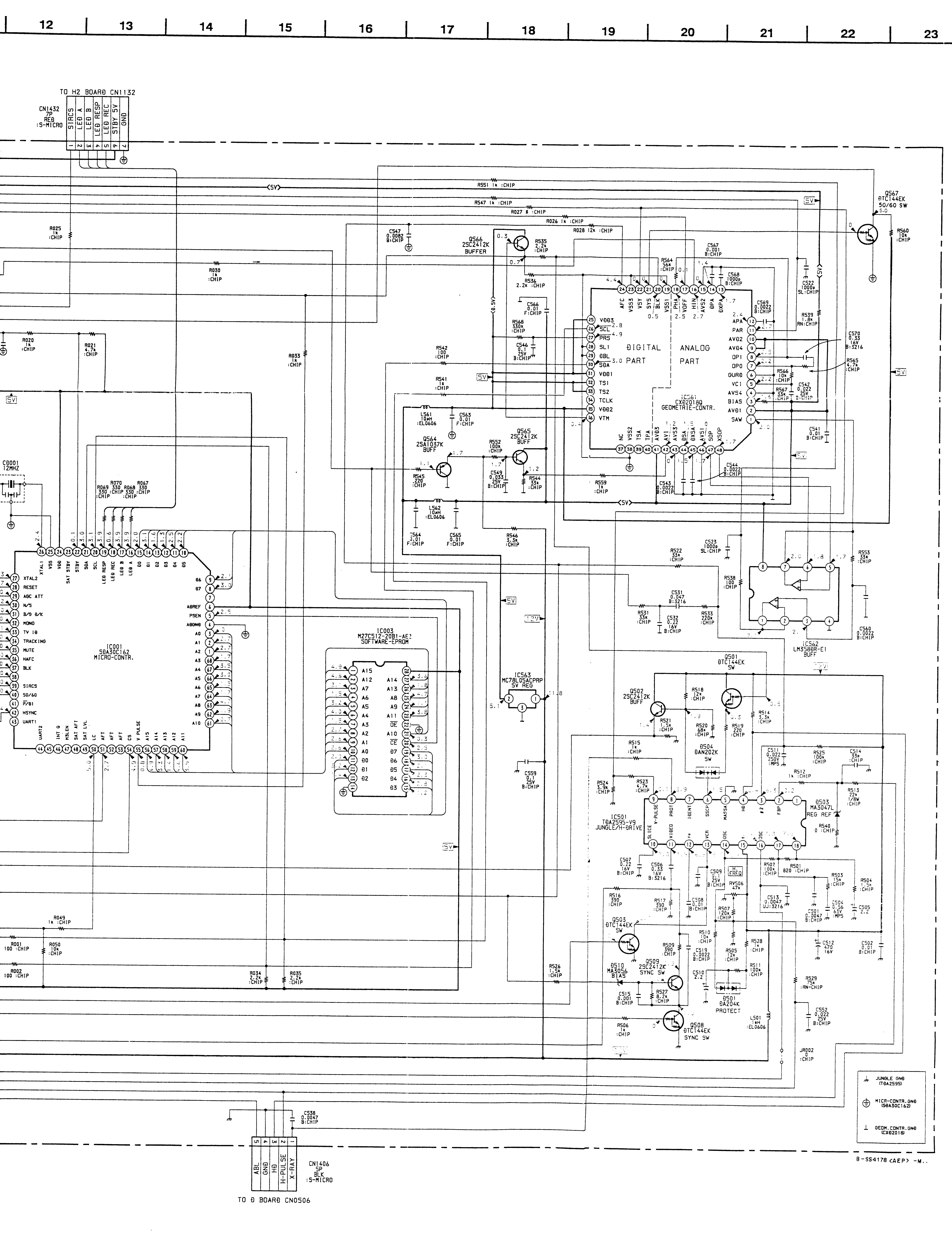
11
TO DY
DY1 6P WHT :DY
H+ H+ H- H- V- V+
CN0522
TO D1 BOARD CNC622
DF-DRIVE2 DF-DRIVE2 DF-DRIVE1 DF-DRIVE1 GND GND 135V +15V FBP15V-P
CN0521 3P WHT :MINI
1000V
200V
E
TO C BOARD CN421
D801 RGP02-20EL-6394 1000V.RECT
CN5521 3P WHT :S-MICRO
H1 NC H2
TO C BOARD CN421
T801 :FBT
T895 :BFT FOR 34" ONLY
CN0529 1P WHT :MINI
E
TO F2 BOARD CN0929
IC1501 TDA8179S V.OUT
DRV-IN Vcc F.B.-PLS Vee OUT-PUT Vcc (OUT) REF-VOLT
D824 RGP02-17PKG23
D825 DAN202K H.PROT
D826 DAN202K RECT
D815 RGP10G 200V.RECT
D814 RU30ALFS1 +15V-RECT
D816 RGP15G -15V.RECT
D802 RGP10G HV.RECT
Q1504 MTZJ-3.6A
Q1501 2SC2412K V.PROT
Q1503 2SA1037K V.PROT
Q1502 DTC144EK V.PROT
Q1504 DTC144EK V.PROT
D1501 DAN202K V.PROT
D1503 GP08D V.BOOST
CN0010 2P RED :S-MICRO
SHORT SHORT
D812 GP08D H.CENT-1
D813 GP08D H.CENT-2
LEFT CENTER RIGHT
CN0009 3P RED :S-MICRO
IC803 MC78L12ACP-RP 12V REG
Q807 2SC2688-LK H.DRIVE
Q801 2SC4927 H-OUT
D811 DAMP.DIODE
D822 MTZJ-30B LIMITER
D828 1SS133 LIMITER
Q813 2SB774 PIN-DRV-1
Q806 2SK1916-F87 PIN-OUT
Q804 2SA1037K C-SUPPL
D804 DAN202K TEMP.CORR
Q102 2SD734 PIN-DRV-2
D809 MTZJ-7.5A REF.VOLT-1
IC801 LM393P PIN-CORR
Q805 2SA1037K BUFFER
IC802 LM393P PIN-CORR
D808 MTZJ-5.6A PLS.CLIP
D818 RD6.2ES-T1B2 DC-SHIFT
D832 DAN202K
D821 DAN202K CLAMP
D830 DAN202K CLAMP
D833 DAN202K
D827 MTZJ2.2A
D831 DAN202K
Q818 2SA1037K I-SOURCE
Q812 2SC2412K INVERTER
CN0004 2P WHT :MINI
GND GND
TO CRT COATING EARTH ASSY
L917 HLC FOR 34"
FOR 25"-29"
JW140 34inch ON OFF
JW130 34inch ON OFF
CN0519 3P YEL :S-MICRO
135V NC GND
TO VM BOARD CN1819
IC603 SHF617G-1 OPTO-COUPLER
D616 MTZJ-12B REG.OPTO-COUPL
IC602 TL431CLP-Z20 REG.OPTO-COUPL
D624 RZK-V1 PROTECT
Q602 2SB772 SW15.5V
Q603 DTC114EK SW.DRIVE 15.5V
CN0504 7P RED :S-MICRO
33V 15.5V GND GND 7.5 V STBY SW15.5V
TO A BOARD CN0104
D619 DAN202K RECT
IC601 TDA4605-3 POWER.SUPPL CONTROL
VIN VPIN VPBET GND SENSE SOFT VSS OUT
D602 RGP10G RECT.AUX.V-PRIM
T601 :SRT
D611 D5L60 RECT.135V
Q611 JC501-Q DETECTOR
Q610 2SA1037K DETECTOR
D620 1SS133
CN0524 3P WHT :S-MICRO
15.5 V GND NC
TO F2 BOARD CN0924
D606 RGP10G RECT.PRIM SUPPL-V
D608 ERC25-06S CLAMP
Q601 BUZ91A-S REG.OUT
D610 ESAB85-009 RECT.15.5V
D612 D10SC6M RECT.7.5V
D613 ESAB92-02 RECT.AUDIO+V
D614 ESAB92-02 RECT.AUDIO-V
CN0505 5P WHT :S-MICRO
P.OFF + 22 V - 22 V AUDIO GND AUDIO GND
TO A BOARD CN0105
IN C C OV C .GND
BOARD N0925
D
H/V DEF H.V OUT POWER CONTROL
8-SS4145<1EP>-0..


CN1426 6P YEL :S-MICRO
PROT
PARA
SAW+
GND
+5V
N/S
TO D BOARD CN0526
R051 22k :CHIP
C035 0.022 :CHIP
C036 0.47 25V F:CHIP
R052 10k :CHIP
Q003 2SC2412K NS-SW
C037 100p :CHIP
C550 1000p SL:CHIP
R053 4.7k :CHIP
R055 22k :CHIP
R054 22k :CHIP
5V
12V
AGC ATT
DGND
B/G D/K
MUTE
MONO
ABL
TV ID
BLK
AFT
SCL
SDA
CS
V OFF
IK
V PULSE
V S/S
SYNC IN
FH
VIDEO
VLC
TVS
H PULSE
LC
H SYNC
5V STBY
TXT BLK
JGND
COR
J5V
R
G
B
SSCP
STBY
L563 2.2mH :EL0606
CN1413 40P WHT :BTOB-P
TO A BOARD CN0113
CN1441 8P RED :S-MICRO
SDA
SCL
GND
VIDEO
SSCP
H.SAW
REF
GND
TO V BOARD CN1741
CN1432 7P RED :S-MICRO
R025 1k :CHIP
C001 100p :CHIP
R020 1k :CHIP
R016 680 :CHIP
Q002 2SA1037K RESET SW
R007 10k :CHIP
R018 470 :CHIP
R017 1k :CHIP
C016 0.001 :CHIP
D001 NA3039H REG REF
R015 0 :CHIP
CD001 12MHZ
C014 100p :CHIP
C012 100p :CHIP
R012 1k :CHIP
R011 1k :CHIP
C011 100p :CHIP
C010 100p :CHIP
R010 1k :CHIP
R014 1k :CHIP
R008 1k :CHIP
R006 1k :CHIP
C008 100p :CHIP
C003 100p :CHIP
R570 1k :CHIP
R032 1k :CHIP
C032 100p :CHIP
XTAL1
VSS
VDD
XTAL2
RESET
ABC ATT
N/S
B/G D/K
MONO
TV ID
TRACKING
MUTE
HAFC
BLK
SIRCS
50/60
P/01
HSYNC
UART1
UART2
INT 0
R038 10k :CHIP
R003 1k :CHIP
C007 100p :CHIP
R001 100 :CHIP
R050 10k :CHIP
R002 100 :CHIP
L001 100µH :EL0606
C018 2.2 16V F:CHIP
C019 22
M
MICRO CONTROL, SOFTWARE EPROM GEOMETRIE CONTROL, JUNGLE/H.DRIVE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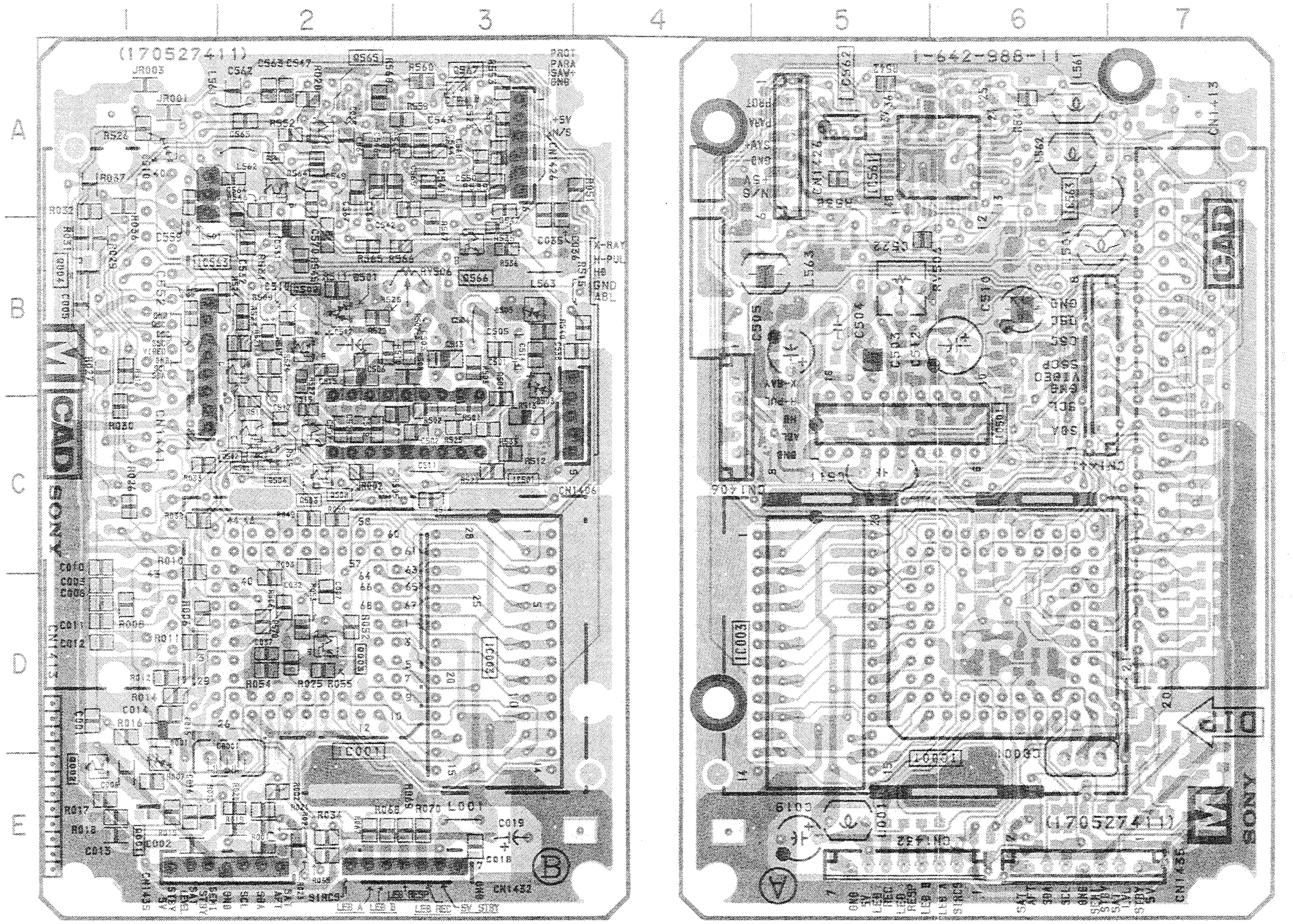
14
15
16
17
18
19
20
21
22
23
TO H2 BOARD CN1132
CN1432 7P RED :S-MICRO
SIRCS
LED A
LED B
LED RESP
LED REC
STBY 5V
GND
R551 1k :CHIP
R547 1k :CHIP
R027 8 :CHIP
R026 1k :CHIP
R028 12k :CHIP
Q567 DTC144EK 50/60 SW
R560 10k :CHIP
R025 1k :CHIP
C547 0.0082 B:CHIP
Q566 2SC2412K BUFFER
R535 2.2k :CHIP
R536 2.2k :CHIP
C567 0.001 B:CHIP
R564 56k :CHIP
C568 1000p B:CHIP
C522 1000p SL:CHIP
R030 1k :CHIP
C566 0.01 F:CHIP
C569 0.0022 B:CHIP
R539 1.8k RN:CHIP
R568 330k :CHIP
C546 0.1 25V B:CHIP
DIGITAL PART
ANALOG PART
IC561 CXD2018Q GEOMETRIE-CONTR.
C570 0.33 16V B:3216
R565 4.7k :CHIP
R566 10k :CHIP
R567 33k :CHIP
C542 0.022 25V B:CHIP
C541 0.01 B:CHIP
R020 1k :CHIP
R021 4.7k :CHIP
R033 1k :CHIP
R542 100 :CHIP
R541 1k :CHIP
L561 10μH :EL0606
C563 0.01 F:CHIP
Q564 2SA1037K BUFF
Q565 2SC2412K BUFF
R552 100k :CHIP
C549 0.033 25V B:CHIP
R544 33k :CHIP
R545 220 :CHIP
R559 1k :CHIP
C543 0.0022 B:CHIP
C544 0.0022 B:CHIP
CD001 12MHZ
R070 330 :CHIP
R069 330 :CHIP
R068 330 :CHIP
R067 330 :CHIP
L562 10μH :EL0606
C564 0.01 F:CHIP
C565 0.01 F:CHIP
R546 3.3k :CHIP
C523 1000p SL:CHIP
R522 33k :CHIP
R538 100 :CHIP
R553 33k :CHIP
C531 0.047 B:3216
R531 33k :CHIP
C532 0.22 16V B:CHIP
R533 220k :CHIP
C560 0.0022 B:CHIP
IC562 LM358DR-E1 BUFF
IC001 SDA30C162 MICRO-CONTR.
XTAL2 RESET AGC ATT N/S B/G B/K MONO TV 18 TRACKING MUTE HAFC BLK SIRCS 50/60 P/B1 HSYNC UART1
XTAL1 VSS VDD SAT STBY STBY SDA SCL LED RESP LED REC LED B LED A D0 D1 D2 D3 D4 D5 D6 D7
ABREF PSEN ABGND A0 A1 A2 A3 A4 A5 A6 A7 A8 A9 A10
UART2 INT Q MSLEN SAT AFT SAT LVL LC AFT AFT AFT CS V PULSE A15 A14 A13 A12 A11
IC003 M27C512-20B1-AE2 SOFTWARE-EPROM
IC563 MC78L05ACPRP 5V REG
Q501 DTC144EK SW
Q502 2SC2412K BUFF
R518 12k :CHIP
R521 1.5k :CHIP
R520 68k :CHIP
R519 220 :CHIP
R514 3.3k :CHIP
R515 1k :CHIP
D504 DAN202K SW
C559 0.1 25V B:CHIP
C511 0.022 250V :MPS
R525 100k :CHIP
C514 33p :CHIP
R512 1k :CHIP
R524 3.9k :CHIP
R523 4.7k :CHIP
IC501 TDA2595-V9 JUNGLE/H-DRIVE
D503 MA3047L REG REF
R513 22k 1/8W :CHIP
R540 0 :CHIP
C507 0.22 16V B:CHIP
C506 0.33 16V B:3216
C509 0.1 25V B:CHIP
H. FREQ
RV506 47k
R502 100k :CHIP
R501 820 :CHIP
R503 15k :CHIP
R504 1.5k :CHIP
R516 390 :CHIP
R517 390 :CHIP
C508 0.01 B:CHIP
R507 120k :CHIP
C513 0.0047 UJ:3216
C501 0.0047 B:CHIP
C504 0.56 63V :MPS
C505 2.2
Q503 DTC144EK SW
R509 390 :CHIP
R510 10k :CHIP
C519 0.0022 B:CHIP
R505 12k :CHIP
R528 1k :CHIP
C512 470 16V
C502 0.01 B:CHIP
R049 1k :CHIP
R001 100 :CHIP
R050 10k :CHIP
R002 100 :CHIP
R034 2.2k :CHIP
R035 2.2k :CHIP
R526 1.5k :CHIP
D510 MA3056 BIAS
Q509 2SC2412K SYNC SW
C510 2.2
R511 100k :CHIP
R529 75k :RN-CHIP
C515 0.001 B:CHIP
R527 8.2k :CHIP
D501 DA204K PROTECT
C552 0.022 25V B:CHIP
R506 1k :CHIP
Q508 DTC144EK SYNC SW
L501 1mH :EL0606
JR002 0 :CHIP
C538 0.0047 B:CHIP
ABL
GND
HD
H-PULSE
X-RAY
CN1406 5P BLK :S-MICRO
TO D BOARD CN0506
JUNGLE GND (TDA2595)
MICR-CONTR. GND (SDA30C162)
GEOM. CONTR. GND (CXD2018)
B-SS4178 <AEP> -M..

— M Board —


1
2
3
4
5
6
7
A
B
C
D
E
(17052741 1)
1-642-988-11
IC001
IC003
CAD
SONY
M
DIP
A
B
CN1432
CN1435
CN1406

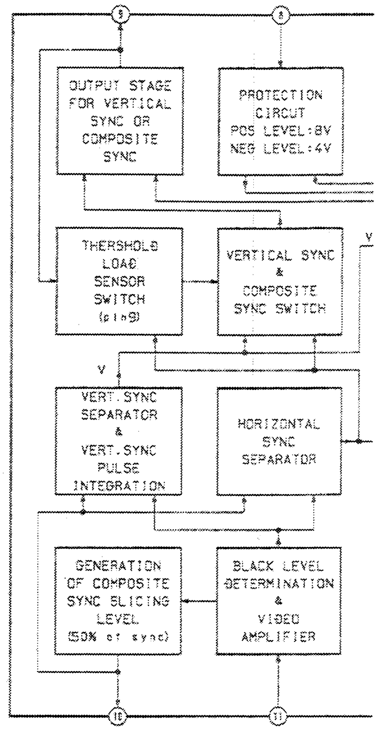
▨ : Pattern from the side which enables seeing.

▨ : Pattern of the rear side.

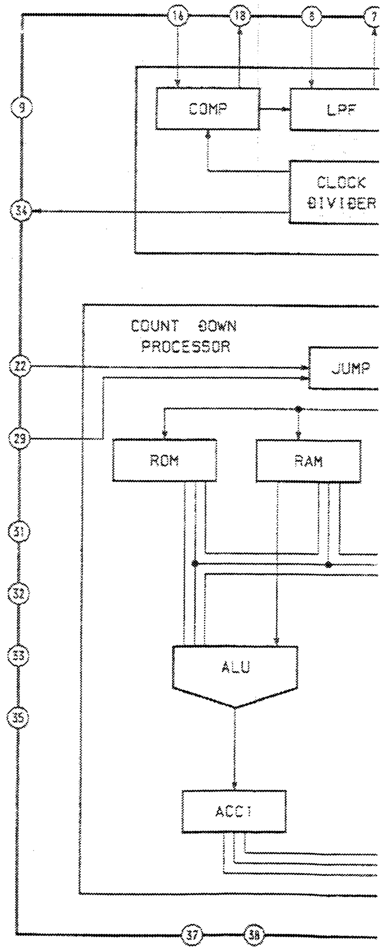
— M Board —

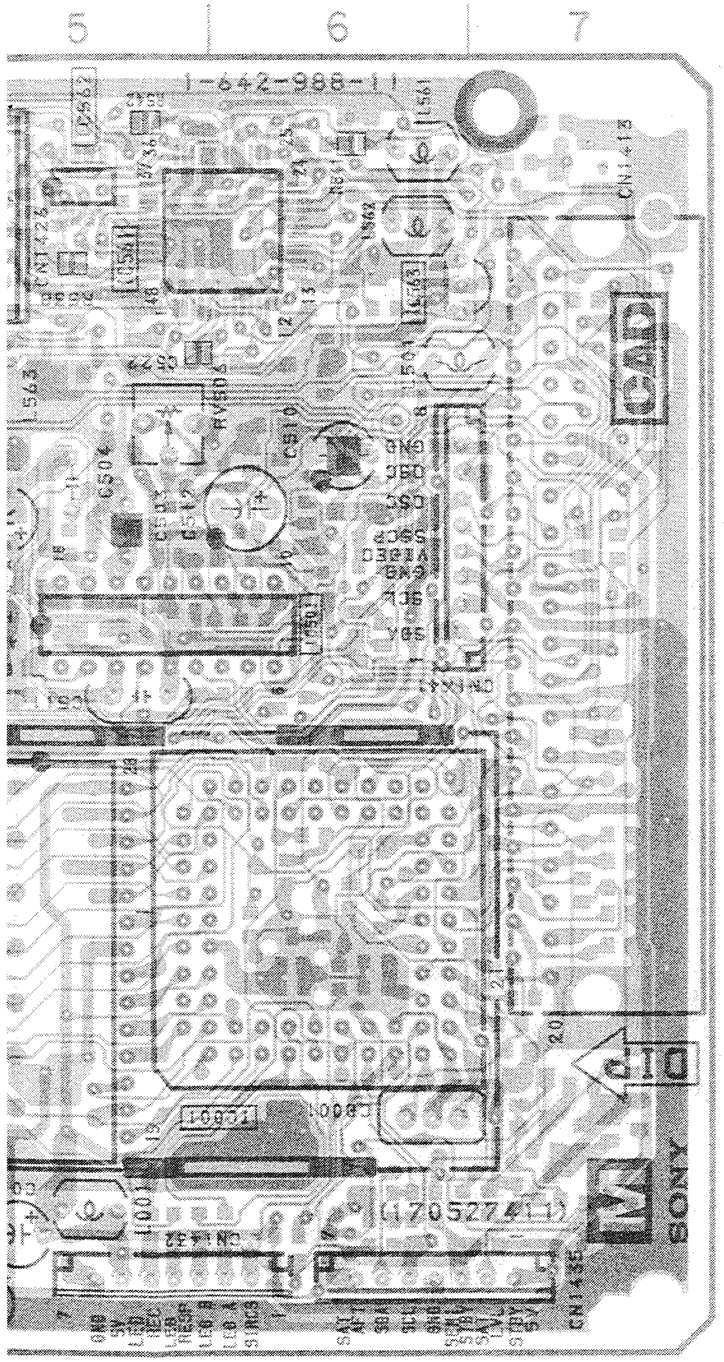
IC	
IC001	D-2
IC003	D-3
IC501	C-3
IC561	A-6
IC562	A-5
IC563	B-1
TRANSISTOR	
Q002	E-1
Q003	D-2
Q501	C-2
Q502	B-2
Q503	C-2
Q508	C-2
Q509	B-2
Q564	A-2
Q565	A-2
Q566	B-3
Q567	A-3
DIODE	
D001	E-1
D501	B-2
D503	B-3
D504	C-2
D505	B-3
D510	A-1
VARIABLE RESISTOR	
RV506	B-3

M BOARD IC501 TDA2595/ V9


9
8
OUTPUT STAGE FOR VERTICAL SYNC OR COMPOSITE SYNC
PROTECTION CIRCUT POS LEVEL:8V NEG LEVEL:4V
THERSHOLD LOAD SENSOR SWITCH (pin9)
VERTICAL SYNC & COMPOSITE SYNC SWITCH
VERT. SYNC SEPARATOR & VERT. SYNC PULSE INTEGRATION
HORIZONTAL SYNC SEPARATOR
GENERATION OF COMPOSITE SYNC SLICING LEVEL (50% of sync)
BLACK LEVEL DETERMINATION & VIDEO AMPLIFIER
10
11

M BOARD IC561 CXD2018Q


16
18
5
7
9
34
COMP
LPF
CLOCK DIVIDER
COUNT DOWN PROCESSOR
JUMP
22
29
ROM
RAM
31
32
33
35
ALU
ACC1
37
38

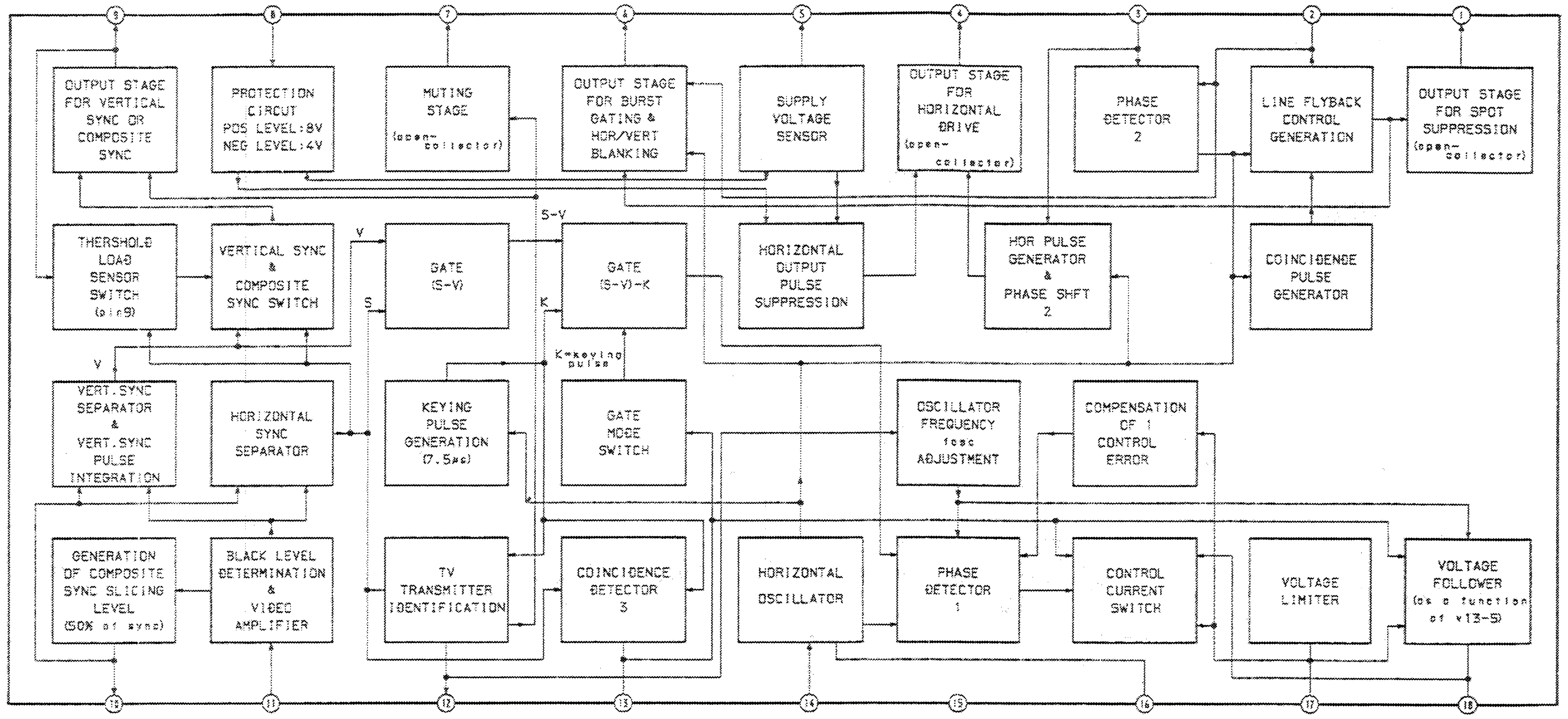

5
6
7
1-642-988-11
CN1413
CAD
SONY
M
IC001
(1705274 11)
CN1432
CN1435
C504
C510
RV506

• ▨ : Pattern from the side which enables seeing.
• ▨ : Pattern of the rear side.

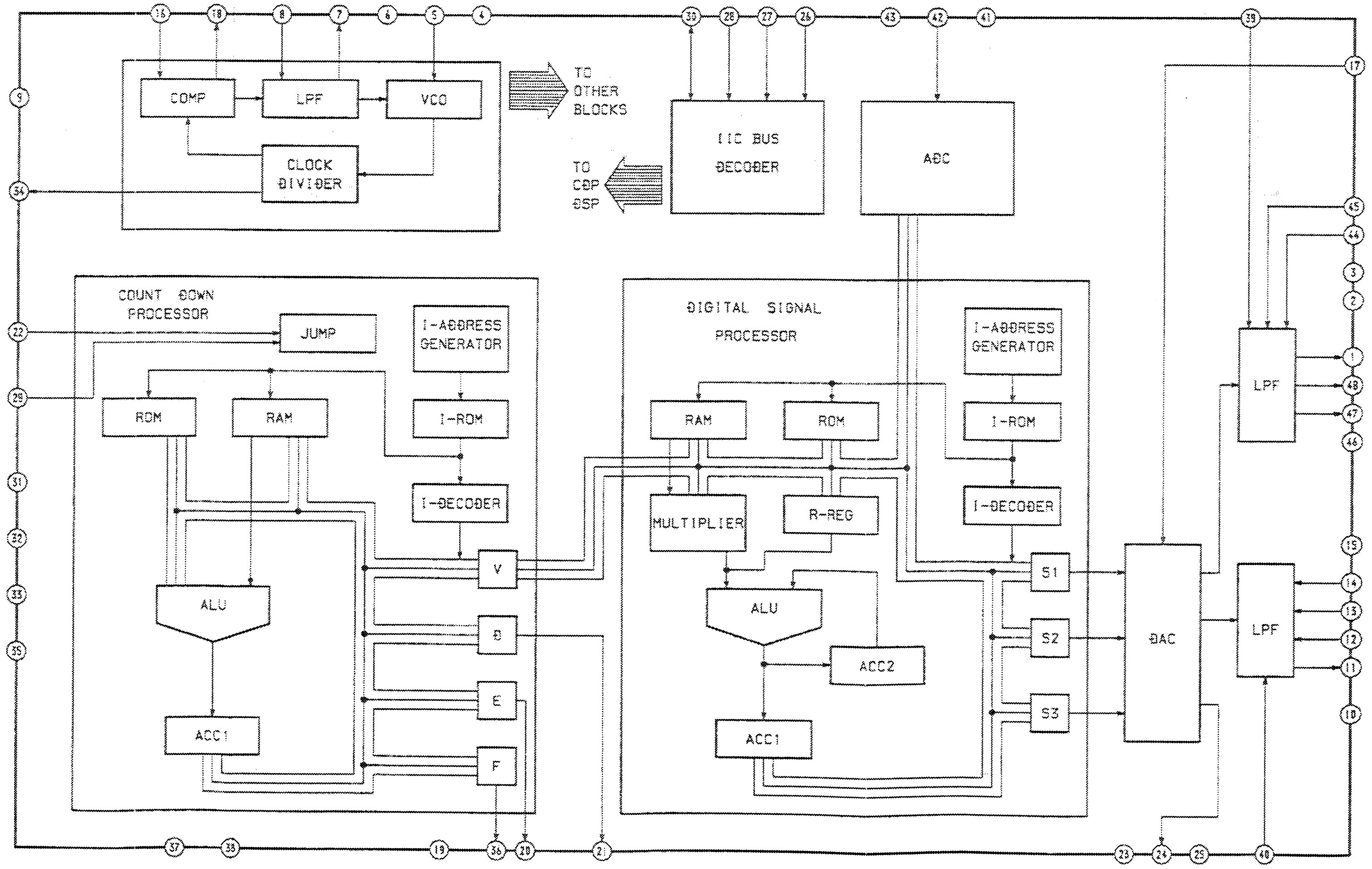
— M Board —

IC	
IC001	D-2
IC003	D-3
IC501	C-3
IC561	A-6
IC562	A-5
IC563	B-1
TRANSISTOR	
Q002	E-1
Q003	D-2
Q501	C-2
Q502	B-2
Q503	C-2
Q508	C-2
Q509	B-2
Q564	A-2
Q565	A-2
Q566	B-3
Q567	A-3
DIODE	
D001	E-1
D501	B-2
D503	B-3
D504	C-2
D505	B-3
D510	A-1
VARIABLE RESISTOR	
RV506	B-3

M BOARD IC501 TDA2595/ V9

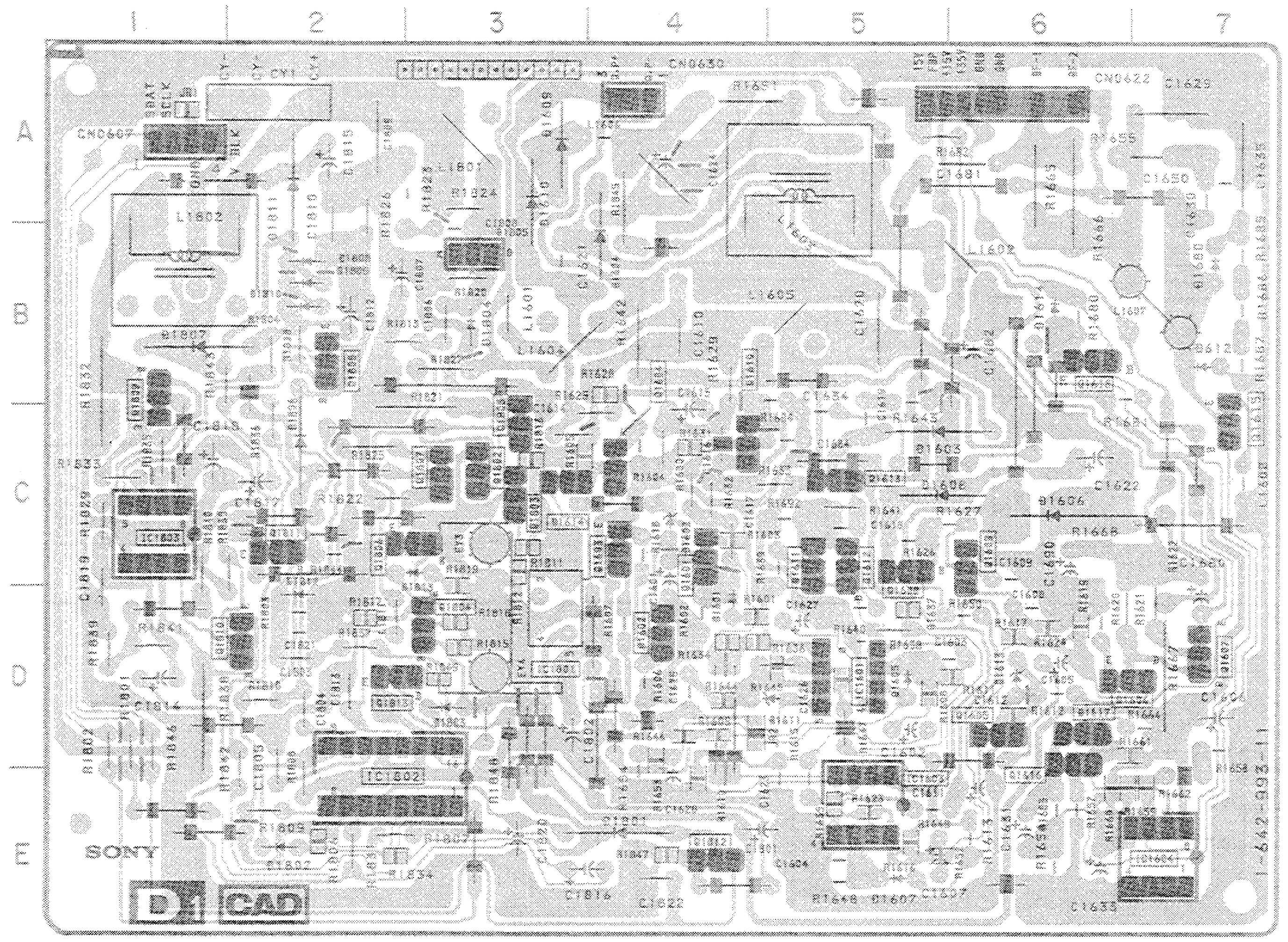

9
8
7
6
5
4
3
2
1
OUTPUT STAGE FOR VERTICAL SYNC OR COMPOSITE SYNC
PROTECTION CIRCUT POS LEVEL:8V NEG LEVEL:4V
MUTING STAGE (open-collector)
OUTPUT STAGE FOR BURST GATING & HOR/VERT BLANKING
SUPPLY VOLTAGE SENSOR
OUTPUT STAGE FOR HORIZONTAL DRIVE (open-collector)
PHASE DETECTOR 2
LINE FLYBACK CONTROL GENERATION
OUTPUT STAGE FOR SPOT SUPPRESSION (open-collector)
S-V
V
S
K
THERSHOLD LOAD SENSOR SWITCH (pin9)
VERTICAL SYNC & COMPOSITE SYNC SWITCH
GATE (S-V)
GATE (S-V)-K
HORIZONTAL OUTPUT PULSE SUPPRESSION
HOR PULSE GENERATOR & PHASE SHFT 2
COINCIDENCE PULSE GENERATOR
K=keying pulse
VERT.SYNC SEPARATOR & VERT.SYNC PULSE INTEGRATION
HORIZONTAL SYNC SEPARATOR
KEYING PULSE GENERATION (7.5μs)
GATE MODE SWITCH
OSCILLATOR FREQUENCY fosc ADJUSTMENT
COMPENSATION OF 1 CONTROL ERROR
GENERATION OF COMPOSITE SYNC SLICING LEVEL (50% of sync)
BLACK LEVEL DETERMINATION & VIDEO AMPLIFIER
TV TRANSMITTER IDENTIFICATION
COINCIDENCE DETECTOR 3
HORIZONTAL OSCILLATOR
PHASE DETECTOR 1
CONTROL CURRENT SWITCH
VOLTAGE LIMITER
VOLTAGE FOLLOWER (as a function of v13-5)
10
11
12
13
14
15
16
17
18

M BOARD IC561 CXD2018Q


16
18
8
7
6
5
4
30
28
27
26
43
42
41
39
17
9
COMP
LPF
VCO
CLOCK DIVIDER
TO OTHER BLOCKS
TO CDP DSP
IIC BUS DECODER
ADC
34
45
44
3
2
COUNT DOWN PROCESSOR
22
JUMP
I-ADDRESS GENERATOR
29
ROM
RAM
I-ROM
I-DECODER
ALU
ACC1
V
D
E
F
31
32
33
35
DIGITAL SIGNAL PROCESSOR
I-ADDRESS GENERATOR
RAM
ROM
I-ROM
MULTIPLIER
R-REG
I-DECODER
ALU
ACC2
ACC1
S1
S2
S3
DAC
LPF
LPF
1
48
47
46
15
14
13
12
11
10
37
38
19
36
20
21
23
24
25
40

D1 [CONVERGENCE]

— D1 Board — (KV-E3431D, E3431B ONLY)

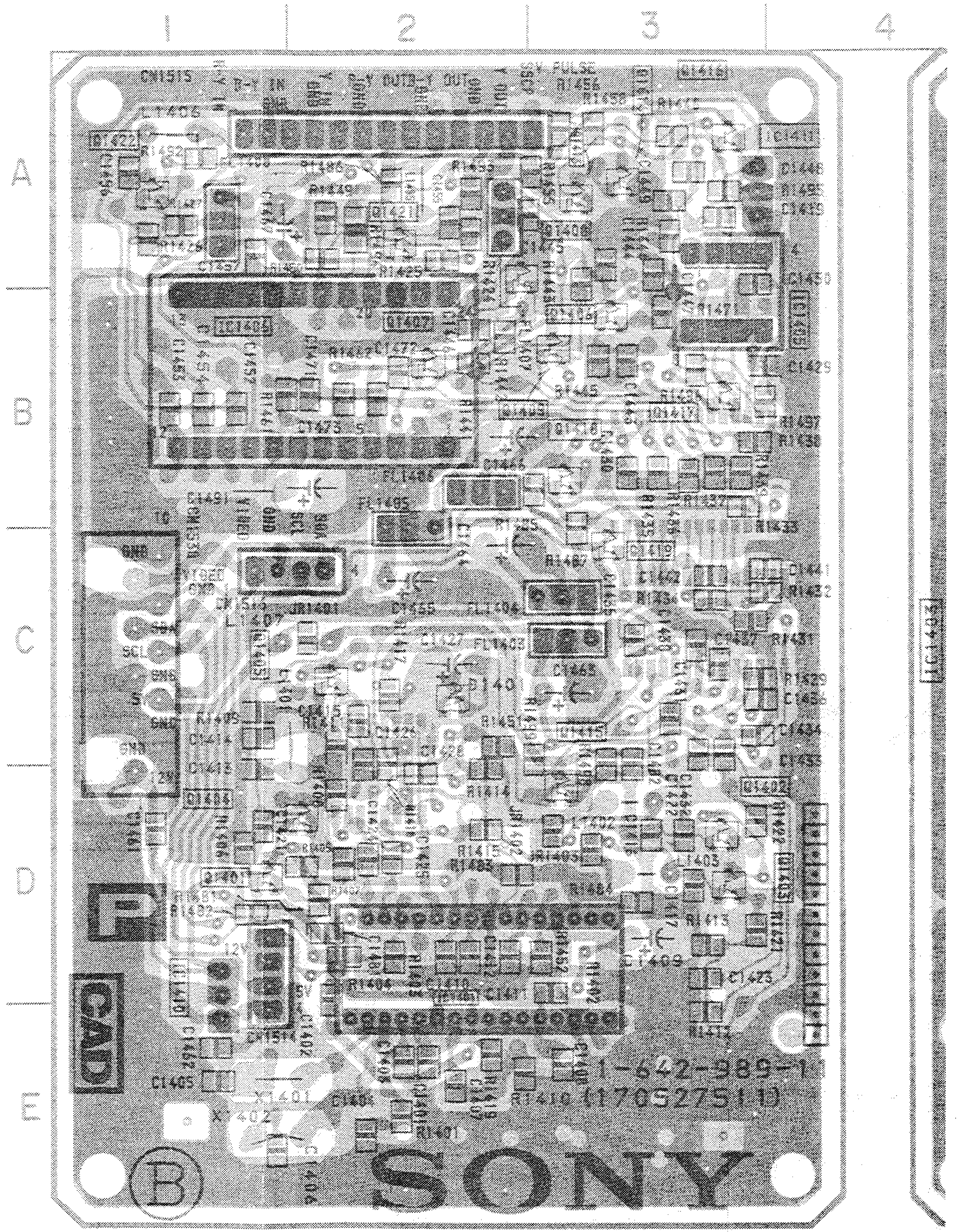

1
2
3
4
5
6
7
A
B
C
D
E
SONY
D1
CAD
1-642-993-11

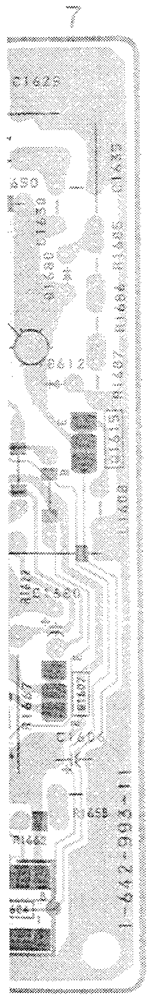
— D1 Board —
(KV-E3431D, E3431B ONLY)

IC	
IC1603	E-5
IC1801	D-3
IC1802	E-2
IC1803	C-1
TRANSISTOR	
Q1610	C-4
Q1613	C-5
Q1802	C-3
Q1803	C-3
Q1804	D-3
Q1805	C-3
Q1806	C-3
Q1807	C-3
Q1808	B-2
Q1809	B-1
Q1810	D-2
Q1811	C-2
Q1812	E-4
Q1813	D-2
DIODE	
D1603	C-5
D1801	E-4
D1802	E-2
D1803	D-3
D1804	B-3
D1805	B-3
D1806	C-2
D1807	B-1
D1808	B-2
D1809	B-2
D1810	B-2
D1811	A-2
D1812	D-2

P [PICTURE IN PICTURE]

— P Board —


1
2
3
4
A
B
C
D
E
P
CAD
SONY
1-642-989-11
(17052751 1)
B

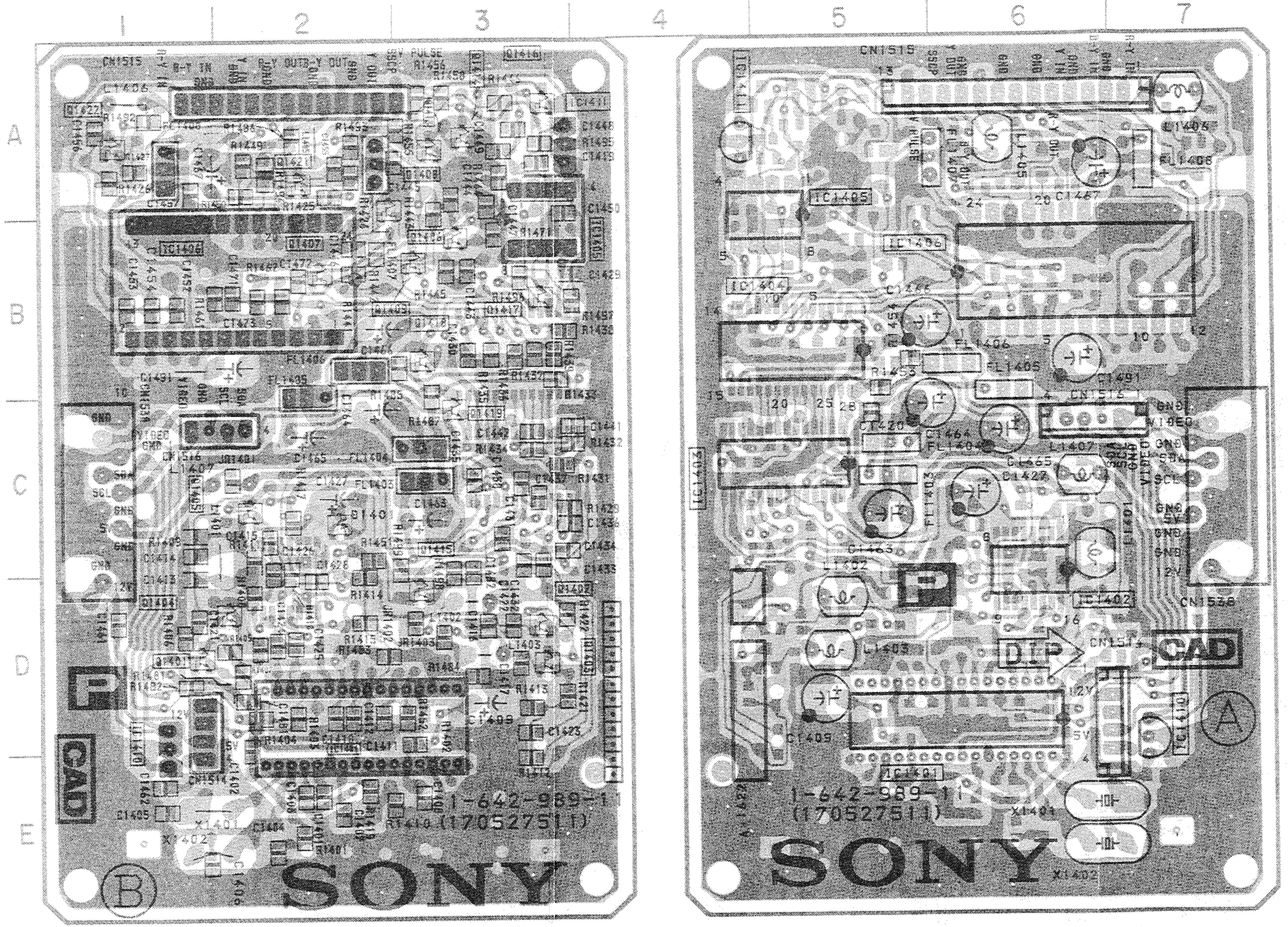


— D1 Board —
(KV-E3431D, E3431B ONLY)

IC	
IC1603	E-5
IC1801	D-3
IC1802	E-2
IC1803	C-1
TRANSISTOR	
Q1610	C-4
Q1613	C-5
Q1802	C-3
Q1803	C-3
Q1804	D-3
Q1805	C-3
Q1806	C-3
Q1807	C-3
Q1808	B-2
Q1809	B-1
Q1810	D-2
Q1811	C-2
Q1812	E-4
Q1813	D-2
DIODE	
D1603	C-5
D1801	E-4
D1802	E-2
D1803	D-3
D1804	B-3
D1805	B-3
D1806	C-2
D1807	B-1
D1808	B-2
D1809	B-2
D1810	B-2
D1811	A-2
D1812	D-2

P [PICTURE IN PICTURE]

— P Board —



- ▒ : Pattern from the side which enables seeing.
- ░ : Pattern of the rear side.

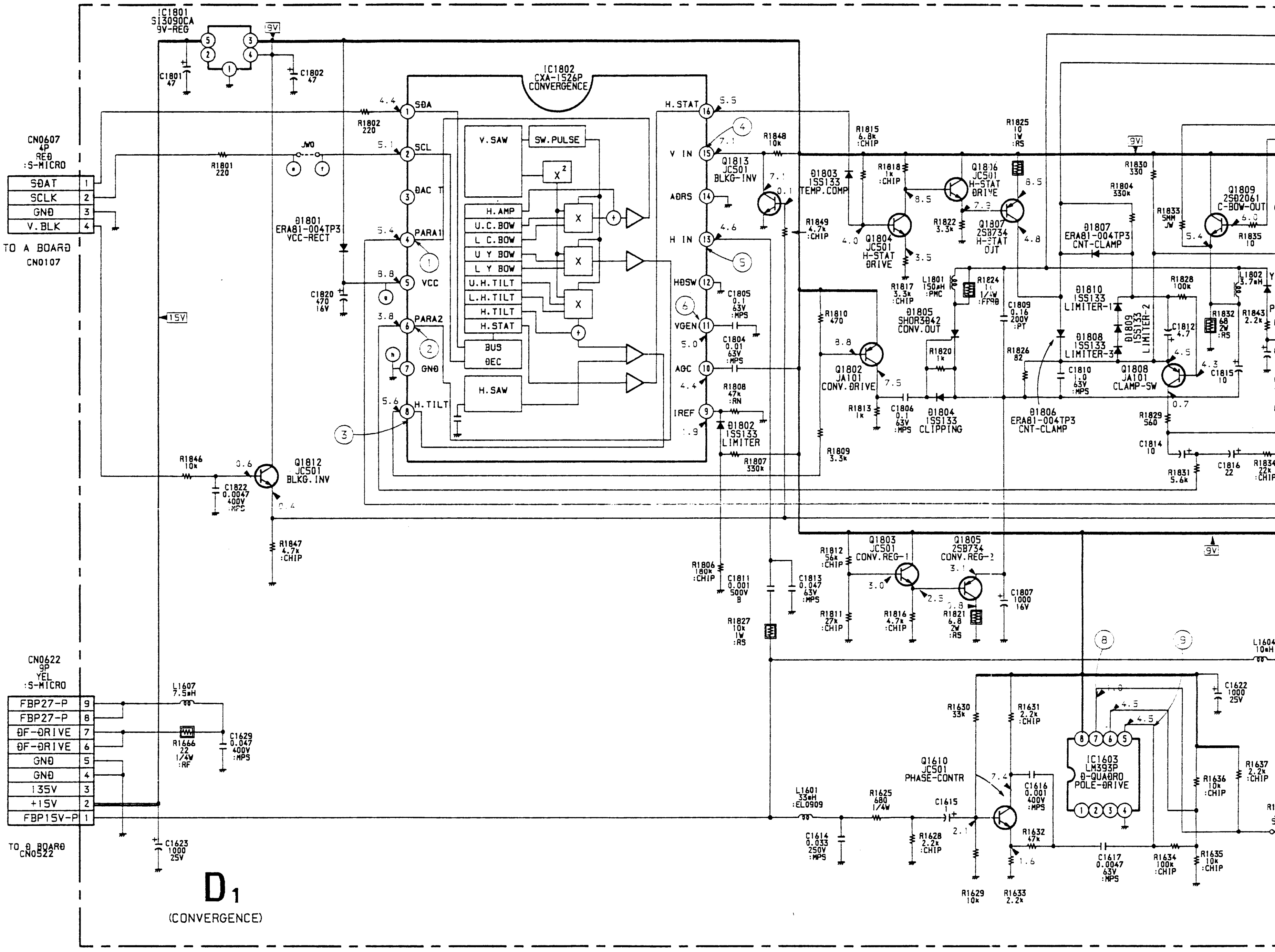
— P Board —

IC	
IC1401	D-2
IC1402	D-6
IC1403	C-5
IC1404	B-5
IC1405	B-3
IC1406	B-2
IC1410	D-1
IC1411	A-4
TRANSISTOR	
Q1401	D-1
Q1402	D-3
Q1403	D-3
Q1404	D-2
Q1405	C-2
Q1406	B-3
Q1407	B-2
Q1408	A-2
Q1409	B-3
Q1413	A-3
Q1414	A-3
Q1415	D-3
Q1416	A-3
Q1417	B-3
Q1418	B-3
Q1419	C-3
Q1421	A-2
Q1422	A-1
DIODE	
D1401	C-2

1 2 3 4 5 6 7 8 9 10

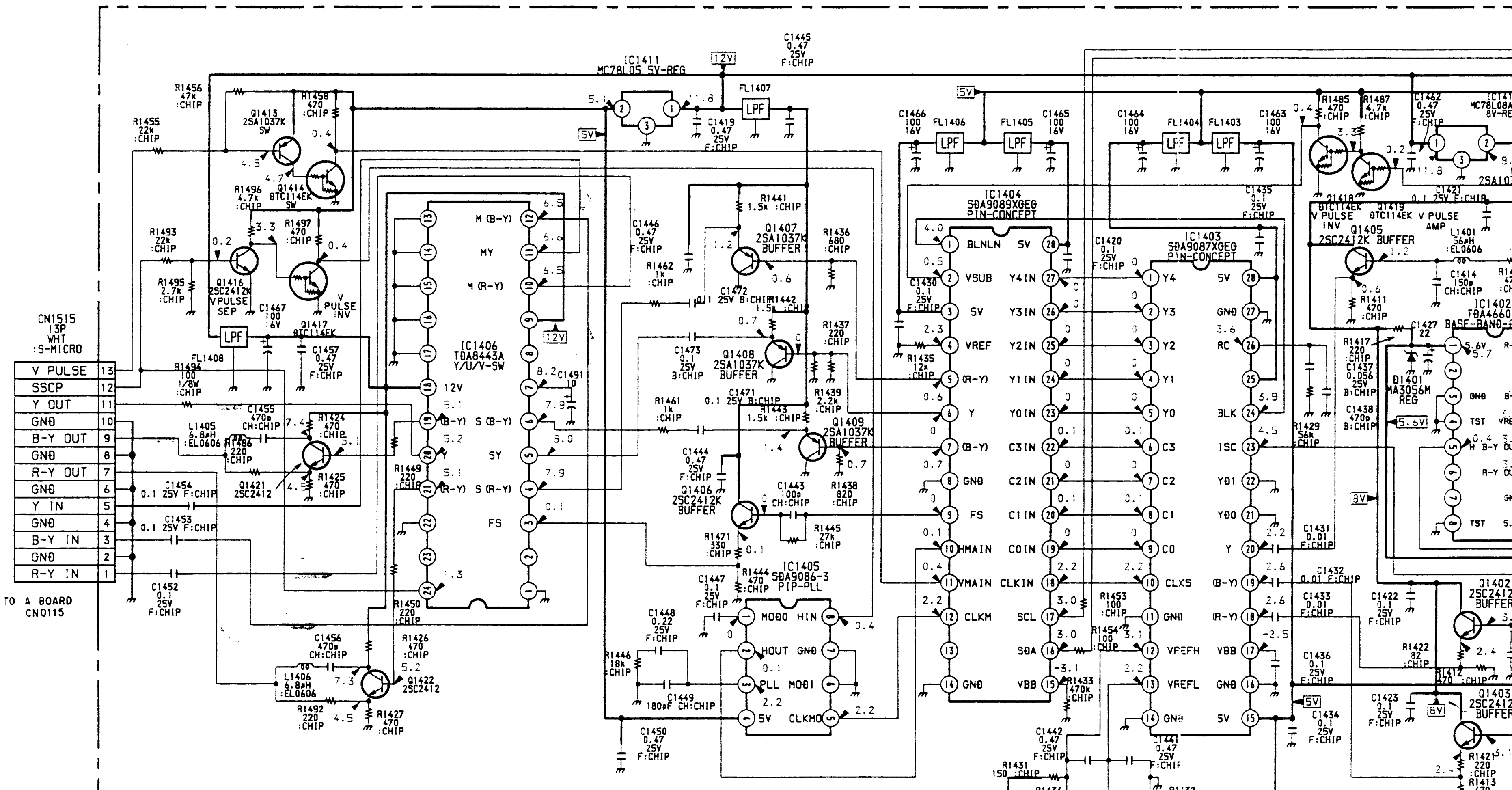
A B C D E F G H I J K L M N O P

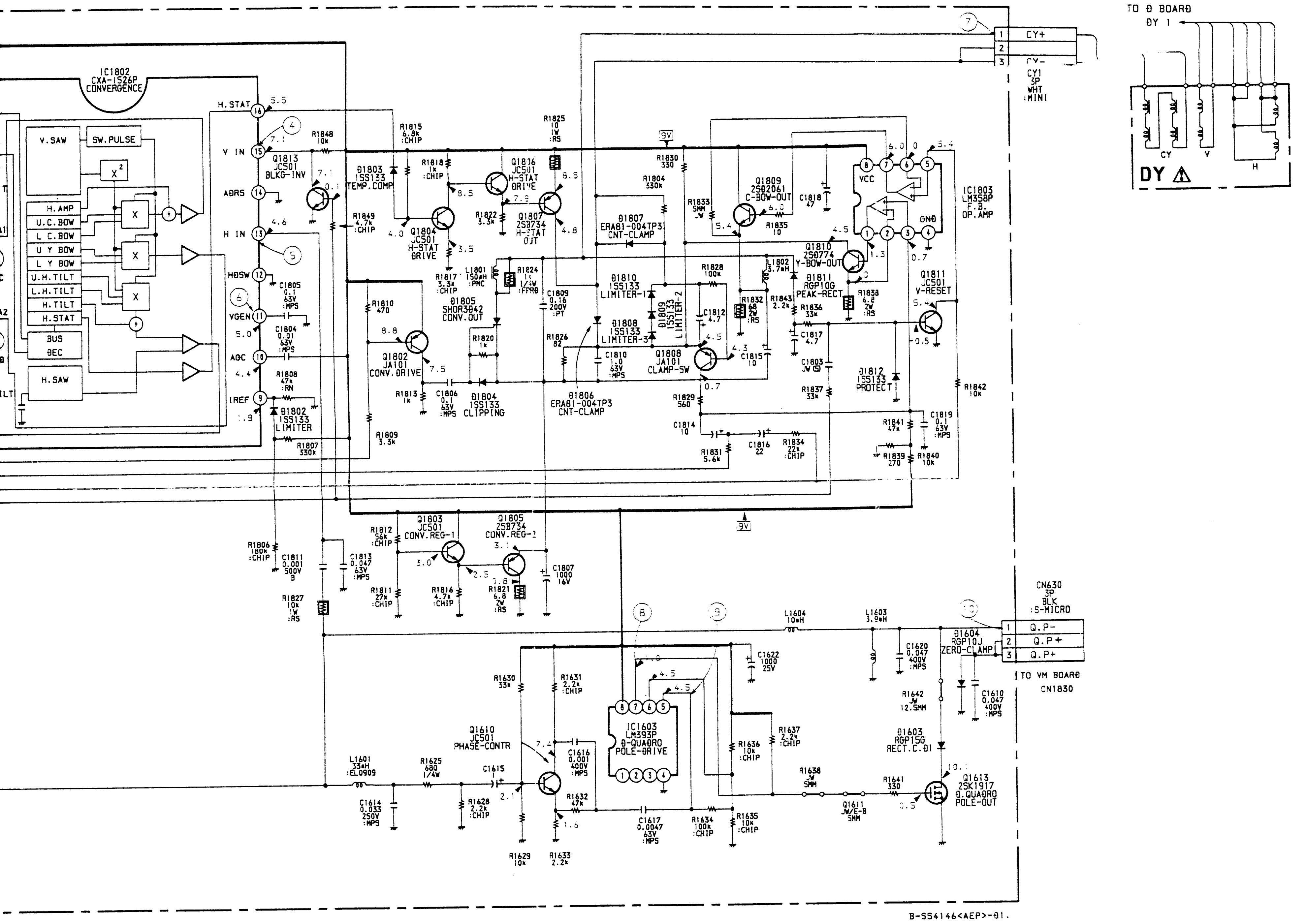
34 inch only


IC1801
S13090CA
9V-REG
IC1802
CXA-1526P
CONVERGENCE
CN0607
4P
RED
:S-MICRO
SDAT
SCLK
GND
V.BLK
TO A BOARD
CN0107
SDA
SCL
DAC T
PARA1
VCC
PARA2
GND
H.TILT
V.SAW
SW.PULSE
H.AMP
U.C.BOW
L.C.BOW
U Y BOW
L Y BOW
U.H.TILT
L.H.TILT
H.TILT
H.STAT
BUS
DEC
H.SAW
H.STAT
V IN
ADRS
H IN
HDSW
VGEN
AGC
IREF
D1801
ERA81-004TP3
VCC-RECT
Q1812
JC501
BLKG.INV
D1802
1SS133
LIMITER
Q1813
JC501
BLKG-INV
D1803
1SS133
TEMP.COMP
Q1804
JC501
H-STAT
DRIVE
Q1816
JC501
H-STAT
DRIVE
Q1807
2SB734
H-STAT
OUT
Q1805
SHOR3842
CONV.OUT
D1804
1SS133
CLIPPING
Q1802
JA101
CONV.DRIVE
Q1803
JC501
CONV.REG-1
Q1805
2SB734
CONV.REG-2
D1807
ERA81-004TP3
CNT-CLAMP
D1810
1SS133
LIMITER-1
D1809
1SS133
LIMITER-2
D1808
1SS133
LIMITER-3
Q1808
JA101
CLAMP-SW
D1806
ERA81-004TP3
CNT-CLAMP
Q1809
2SD2061
C-BOW-OUT
CN0622
9P
YEL
:S-MICRO
FBP27-P
FBP27-P
DF-DRIVE
DF-DRIVE
GND
GND
135V
+15V
FBP15V-P
TO D BOARD
CN0522
L1607
7.5mH
L1601
33mH
Q1610
JC501
PHASE-CONTR
IC1603
LM393P
D-QUADRO
POLE-DRIVE
15V
9V
5V

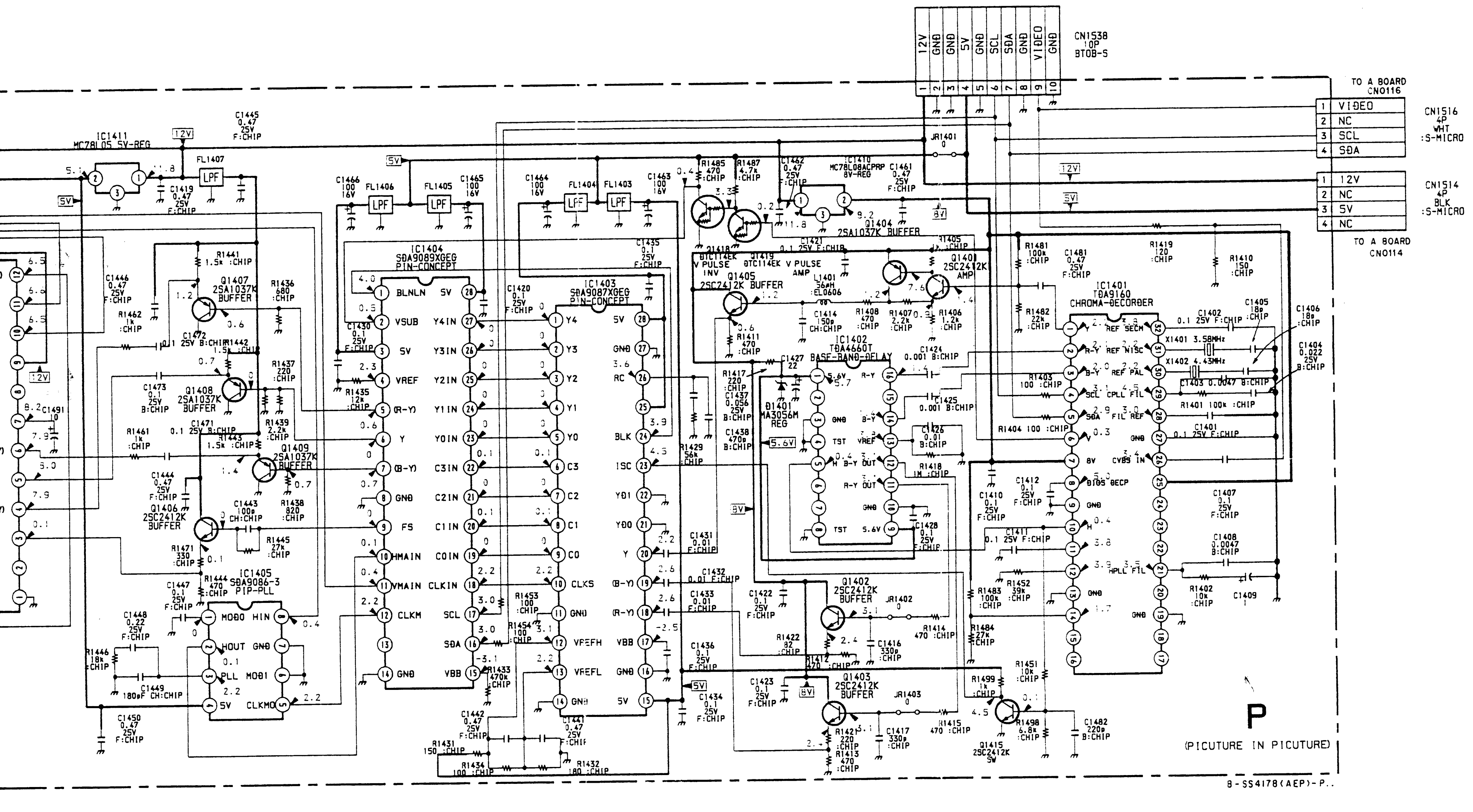
D₁

(CONVERGENCE)


IC1411
MC78L05 5V-REG
12V
5V
CN1515
13P
WHT
:S-MICRO
V PULSE
SSCP
Y OUT
GND
B-Y OUT
GND
R-Y OUT
GND
Y IN
GND
B-Y IN
GND
R-Y IN
TO A BOARD
CN0115
Q1413
2SA1037K
Q1414
DTC114EK
Q1416
2SC2412K
VPULSE
SEP
Q1417
DTC114EK
V PULSE
INV
Q1421
2SC2412
Q1422
2SC2412
L1405
6.8mH
:EL0606
L1406
6.8mH
:EL0606
IC1406
TDA8443A
Y/U/V-SW
M (B-Y)
MY
M (R-Y)
S (B-Y)
SY
S (R-Y)
FS
12V
Q1407
2SA1037K
BUFFER
Q1408
2SA1037K
BUFFER
Q1409
2SA1037K
BUFFER
Q1406
2SC2412K
BUFFER
IC1405
SDA9086-3
PIP-PLL
HOUT
PLL
MOBI
HIN
MOBO
CLKMO
IC1404
SDA9089XGEG
PIP-CONCEPT
BLNLN
VSUB
VREF
(R-Y)
Y
(B-Y)
GND
FS
HMAIN
VMAIN
CLKM
Y4IN
Y3IN
Y2IN
Y1IN
Y0IN
C3IN
C2IN
C1IN
C0IN
CLKIN
SCL
SDA
VBB
IC1403
SDA9087XGEG
PIN-CONCEPT
Y4
Y3
Y2
Y1
Y0
C3
C2
C1
C0
CLKS
GND
VREFH
VREFL
RC
BLK
ISC
YDI
YDO
FL1406
FL1405
FL1404
FL1403
FL1407
LPF
Q1405
2SC2412K
BUFFER
D1401
MA3056M
REG
Q1402
2SC2412
BUFFER
Q1403
2SC2412
BUFFER


IC1802
CXA-1526P
CONVERGENCE
V.SAW
SW.PULSE
H.AMP
U.C.BOW
L C.BOW
U Y BOW
L Y BOW
U.H.TILT
L.H.TILT
H.TILT
H.STAT
BUS
DEC
H.SAW
H.STAT
V IN
ADRS
H IN
HDSW
VGEN
AGC
IREF
Q1813
JC501
BLKG-INV
Q1803
1SS133
TEMP.COMP
Q1804
JC501
H-STAT
DRIVE
Q1816
JC501
H-STAT
DRIVE
Q1807
2SB734
H-STAT
OUT
D1807
ERA81-004TP3
CNT-CLAMP
Q1809
2SD2061
C-BOW-OUT
IC1803
LM358P
F.B.
OP.AMP
Q1810
2SB774
Y-BOW-OUT
D1811
RGP10G
PEAK-RECT
Q1811
JC501
V-RESET
D1810
1SS133
LIMITER-1
D1809
1SS133
LIMITER-2
D1808
1SS133
LIMITER-3
Q1808
JA101
CLAMP-SW
Q1805
SHOR3842
CONV.OUT
Q1802
JA101
CONV.DRIVE
D1804
1SS133
CLIPPING
D1806
ERA81-004TP3
CNT-CLAMP
D1802
1SS133
LIMITER
D1812
1SS133
PROTECT
Q1803
JC501
CONV.REG-1
Q1805
2SB734
CONV.REG-2
CY+
CY-
CY1
3P
WHT
:MINI
TO D BOARD
DY 1
CY
V
H
DY ⚠
CN630
3P
BLK
:S-MICRO
Q.P-
Q.P+
Q.P+
TO VM BOARD
CN1830
D1604
RGP10J
ZERO-CLAMP
D1603
RGP15G
RECT.C.D1
Q1613
2SK1917
D.QUADRO
POLE-OUT
Q1611
JW/E-B
5MM
IC1603
LM393P
D-QUADRO
POLE-DRIVE
Q1610
JC501
PHASE-CONTR
L1601
33μH
:EL0909
L1604
10mH
L1403
3.9mH

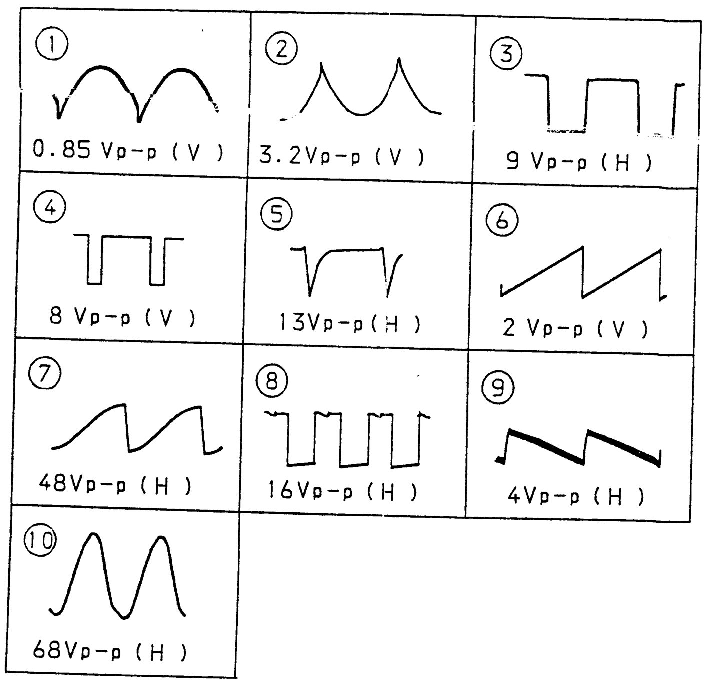
B-SS4146<AEP>-01.


CN1538
10P
BTOB-S
12V
GND
GND
5V
GND
SCL
SDA
GND
VIDEO
GND
TO A BOARD
CN0116
VIDEO
NC
SCL
SDA
CN1516
4P
WHT
:S-MICRO
12V
NC
5V
NC
CN1514
4P
BLK
:S-MICRO
TO A BOARD
CN0114
IC1411
MC78L05 5V-REG
FL1407
LPF
FL1406
LPF
FL1405
LPF
FL1404
LPF
FL1403
LPF
IC1404
SDA9089XGEG
PIP-CONCEPT
IC1403
SDA9087XGEG
PIP-CONCEPT
IC1405
SDA9086-3
PIP-PLL
Q1407
2SA1037K
BUFFER
Q1408
2SA1037K
BUFFER
Q1409
2SA1037K
BUFFER
Q1406
2SC2412K
BUFFER
IC1410
MC78L08ACPRP
8V-REG
Q1404
2SA1037K BUFFER
Q1418
DTC114EK
V PULSE
INV
Q1419
DTC114EK V PULSE
AMP
Q1405
2SC2412K BUFFER
Q1401
2SC2412K
AMP
IC1402
TDA4660T
BASE-BAND-DELAY
D1401
MA3056M
REG
IC1401
TDA9160
CHROMA-DECORDER
X1401 3.58MHz
X1402 4.43MHz
Q1402
2SC2412K
BUFFER
Q1403
2SC2412K
BUFFER
Q1415
2SC2412K

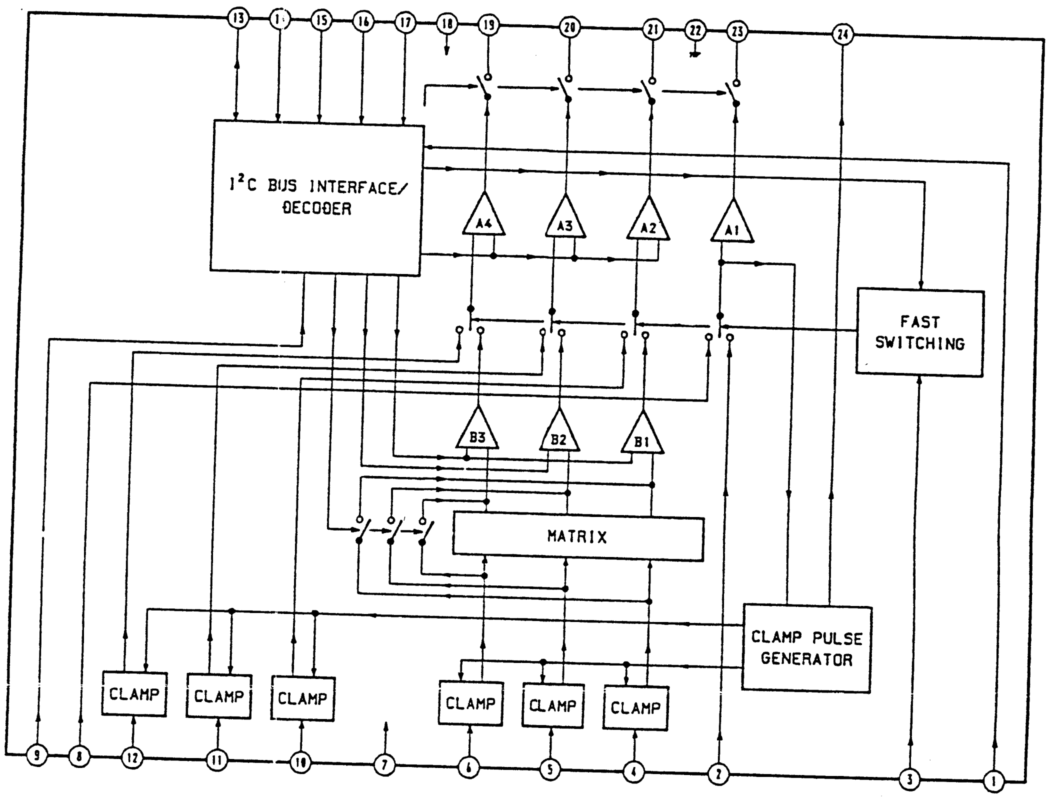
P
(PICUTURE IN PICUTURE)

B-SS4178(AEP)-P..

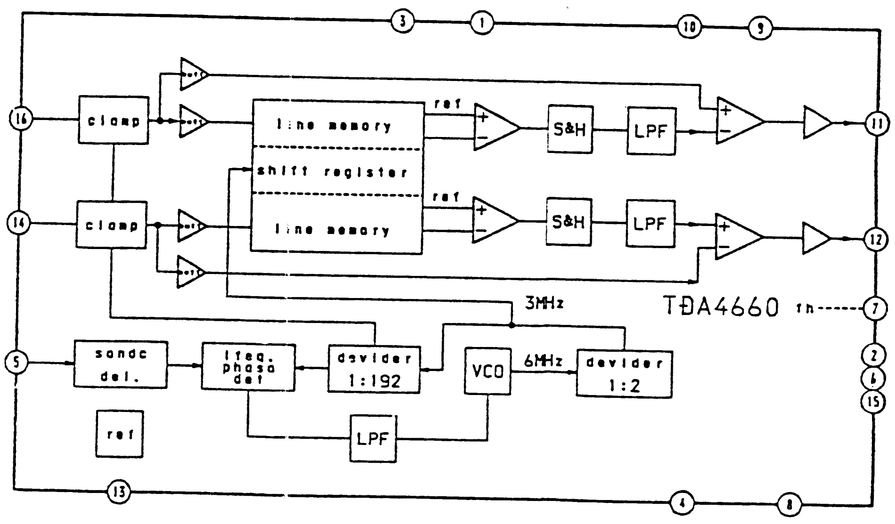
— **D1 Board** — **(KV-E3431D, E3431B ONLY)**



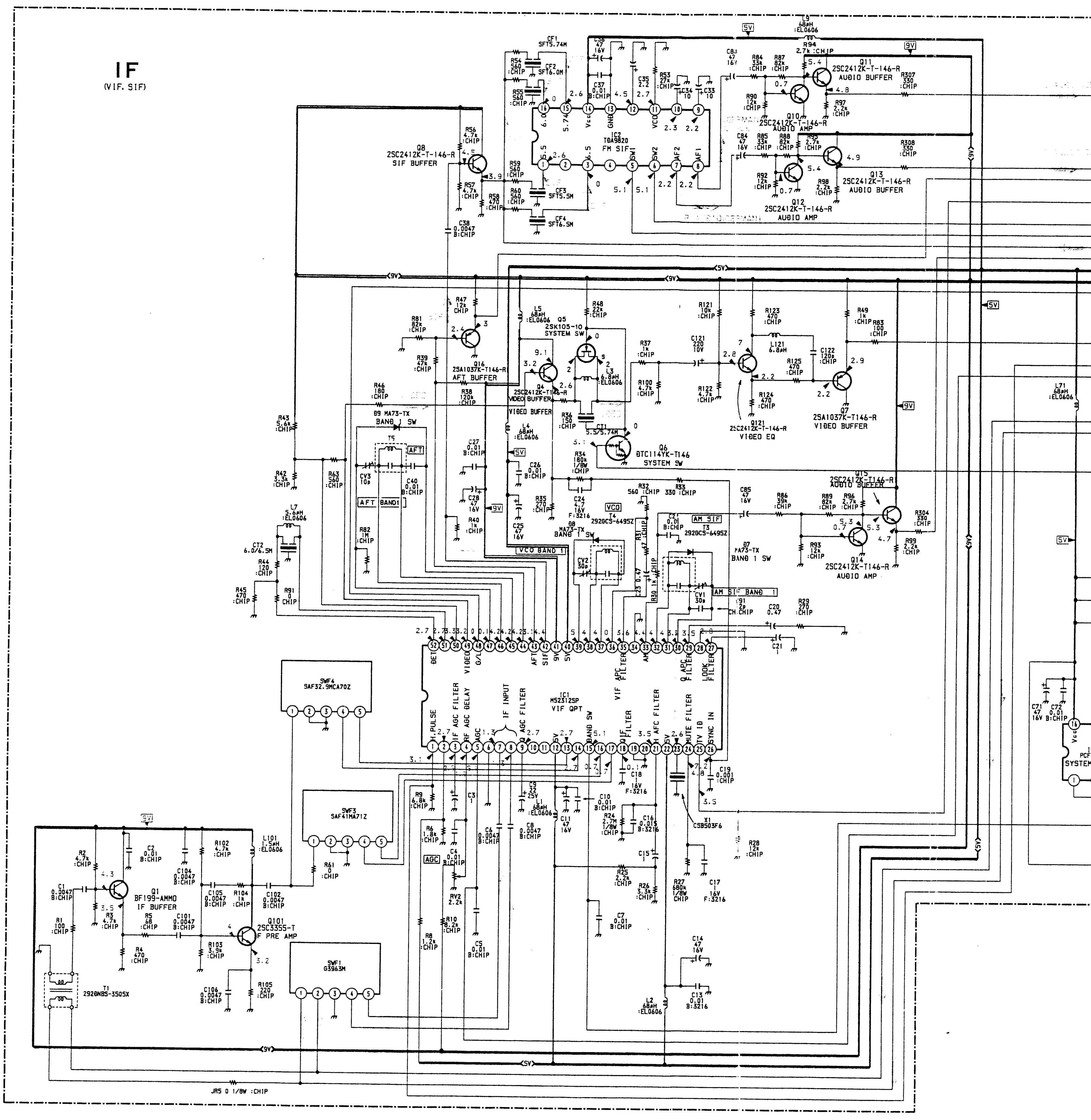
P BOARD IC1406 TDA8443A

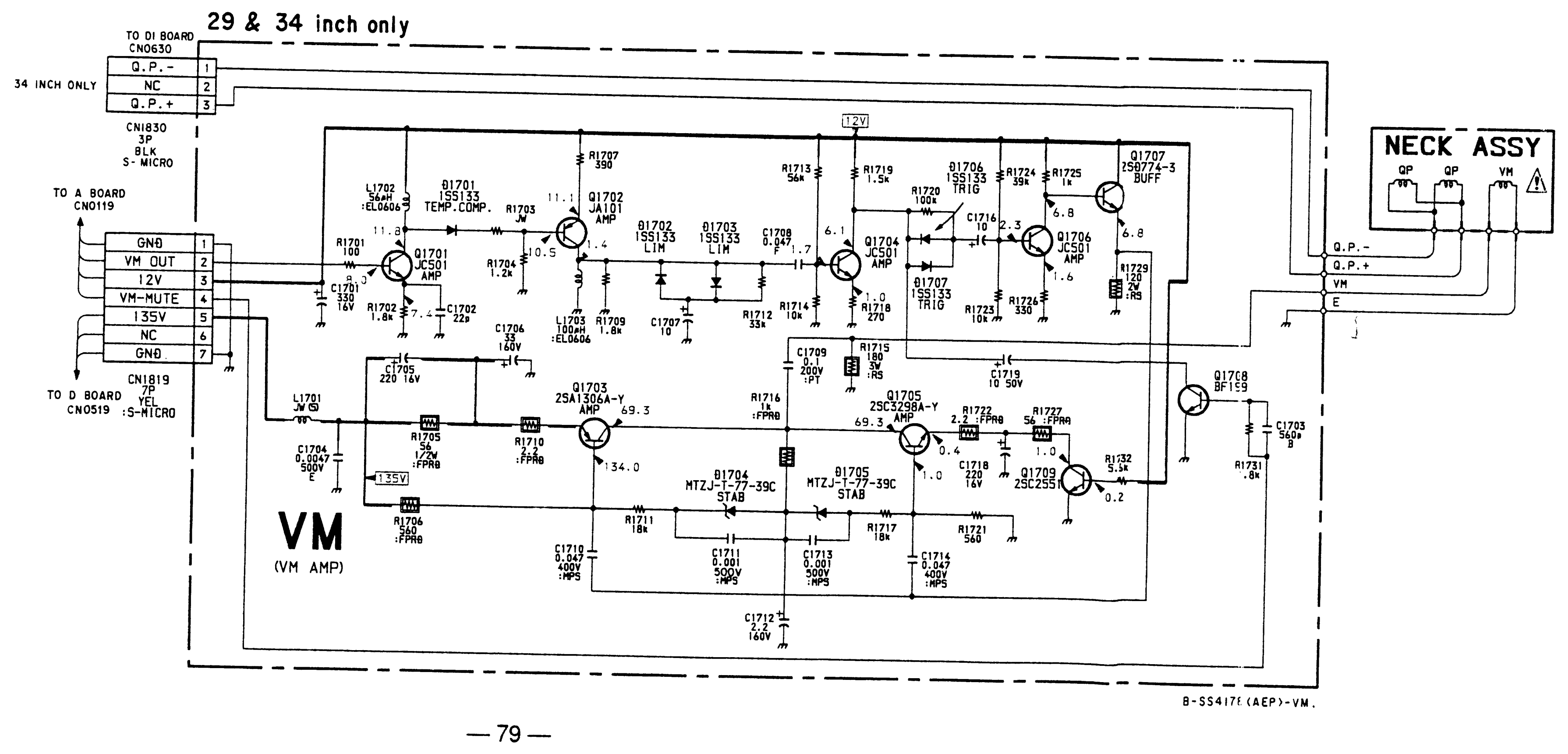

I²C BUS INTERFACE/ DECODER
A4
A3
A2
A1
FAST SWITCHING
B3
B2
B1
MATRIX
CLAMP PULSE GENERATOR
CLAMP
CLAMP
CLAMP
CLAMP
CLAMP
CLAMP
13
14
15
16
17
18
19
20
21
22
23
24
9
8
12
11
10
7
6
5
4
2
3
1

P BOARD IC1402 TDA4660

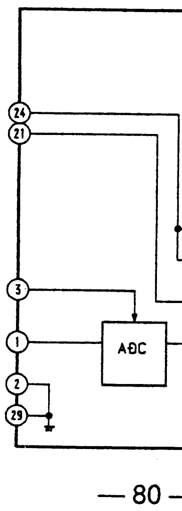

3
1
10
9
16
14
5
clamp
clamp
line memory
shift register
line memory
ref
ref
S&H
S&H
LPF
LPF
11
12
3MHz
TDA4660
fh
7
2
6
15
sandc del.
lfeq. phase det
devider 1:192
VCO
6MHz
devider 1:2
ref
LPF
13
4
8

(KV-E2531B/E2931B/E3431B ONLY)

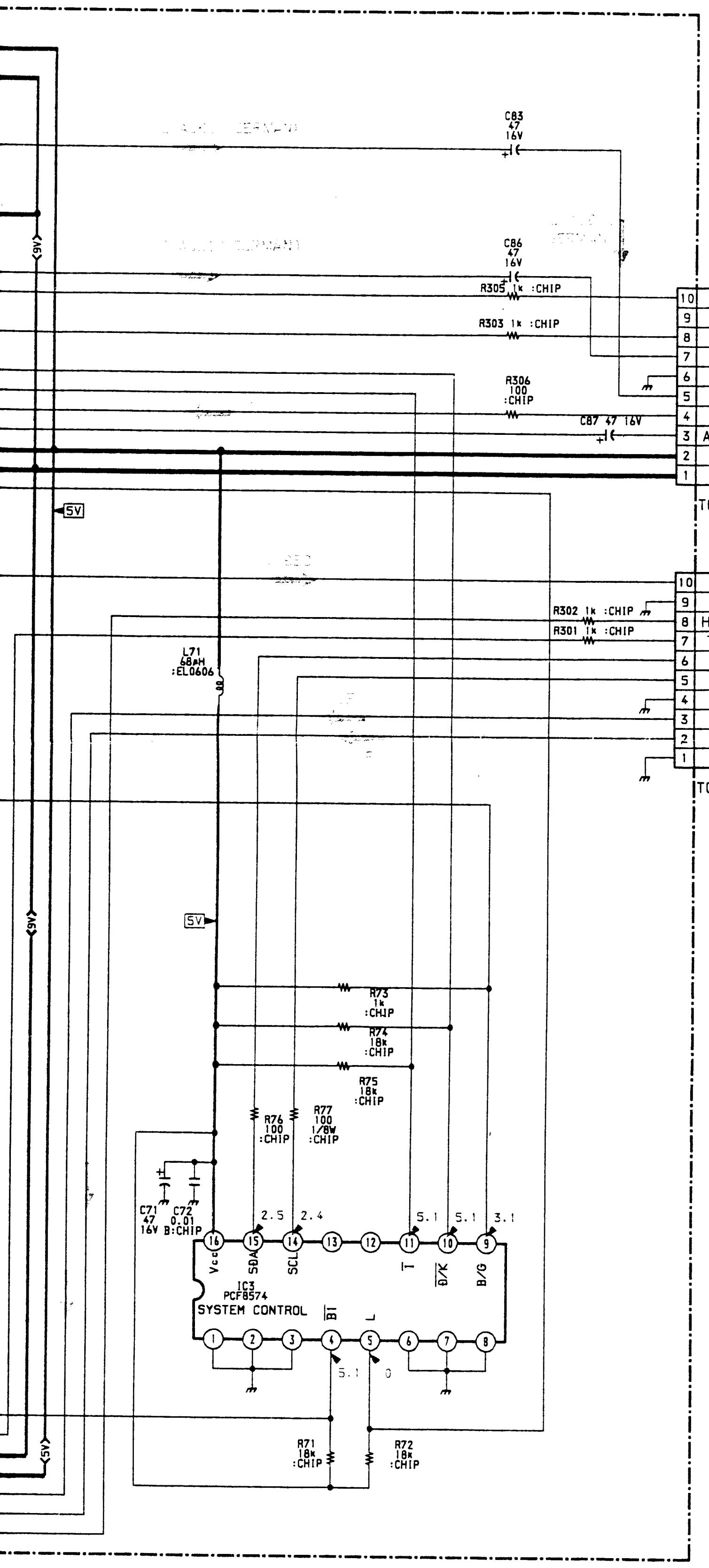

IF
(VIF. SIF)
IC2 TDA9820 FM SIF
Q8 2SC2412K-T-146-R SIF BUFFER
Q11 2SC2412K-T-146-R AUDIO BUFFER
Q10 2SC2412K-T-146-R AUDIO AMP
Q13 2SC2412K-T-146-R AUDIO BUFFER
Q12 2SC2412K-T-146-R AUDIO AMP
Q5 2SK105-10 SYSTEM SW
Q16 2SA1037K-T146-R AFT BUFFER
Q4 2SC2412K-T146-R VIDEO BUFFER
Q121 2SC2412K-T-146-R VIDEO EQ
Q7 2SA1037K-T146-R VIDEO BUFFER
Q6 DTC114YK-T146 SYSTEM SW
Q15 2SC2412K-T146-R AUDIO BUFFER
Q14 2SC2412K-T146-R AUDIO AMP
IC1 M52312SP VIF QPT
SWF4 SAF32.9MCA70Z
SWF3 SAF41MA71Z
SWF1 G3963M
Q1 BF199-AMMO IF BUFFER
Q101 2SC3355-T IF PRE AMP
T1 2920NBS-3505X
X1 CSB503F6
AFT
AFT BAND1
VCO BAND 1
VCO
AM SIF
AM SIF BAND 1
AGC
(9V)
(5V)
JR5 0 1/8W :CHIP

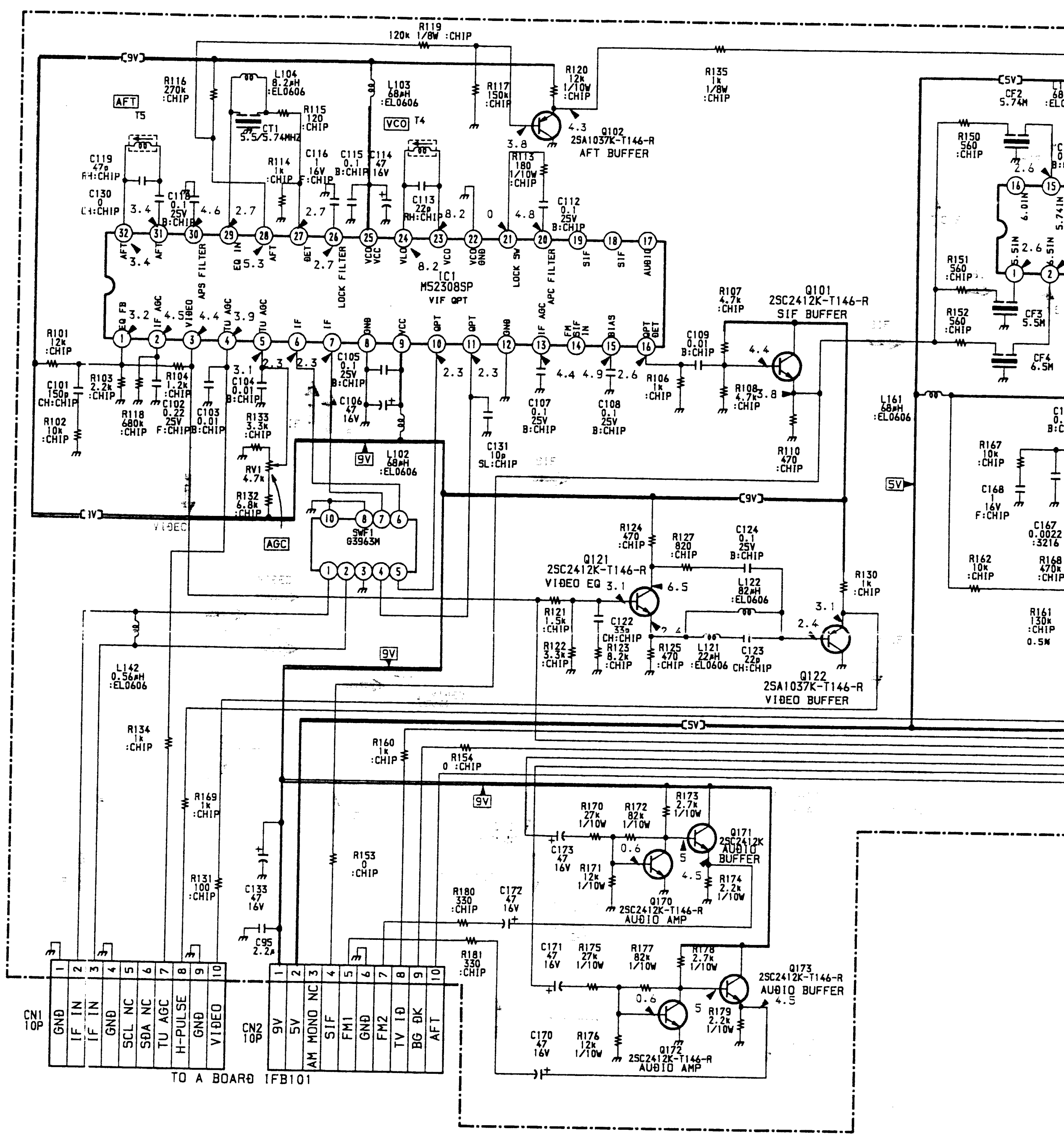

29 & 34 inch only
TO DI BOARD CN0630
Q.P.-
NC
Q.P.+
34 INCH ONLY
CN1830 3P BLK S-MICRO
TO A BOARD CN0119
GND
VM OUT
12V
VM-MUTE
135V
NC
GND
TO D BOARD CN0519
CN1819 7P YEL :S-MICRO
VM
(VM AMP)
Q1701 JC501 AMP
D1701 1SS133 TEMP.COMP.
Q1702 JA101 AMP
D1702 1SS133 LIM
D1703 1SS133 LIM
Q1704 JC501 AMP
D1706 1SS133 TRIG
D1707 1SS133 TRIG
Q1706 JC501 AMP
Q1707 2SD774-3 BUFF
Q1708 BF199
Q1703 2SA1306A-Y AMP
Q1705 2SC3298A-Y AMP
Q1709 2SC2551
D1704 MTZJ-T-77-39C STAB
D1705 MTZJ-T-77-39C STAB
NECK ASSY
QP
QP
VM
Q.P.-
Q.P.+
VM
E
12V
135V
B-SS4176(AEP)-VM.

B1 BOARD I

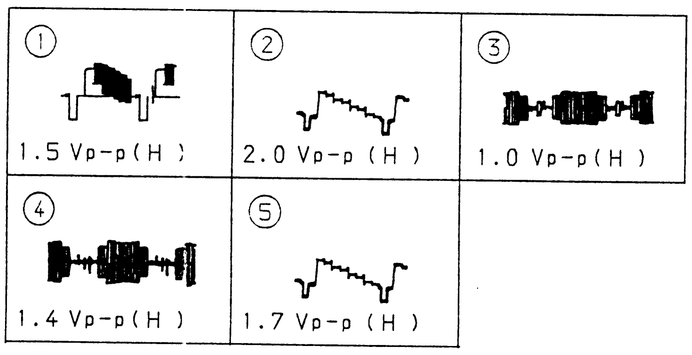

24
21
3
1
2
29
AOC

(KV-E2531D/E2931D/E3431D ONLY)

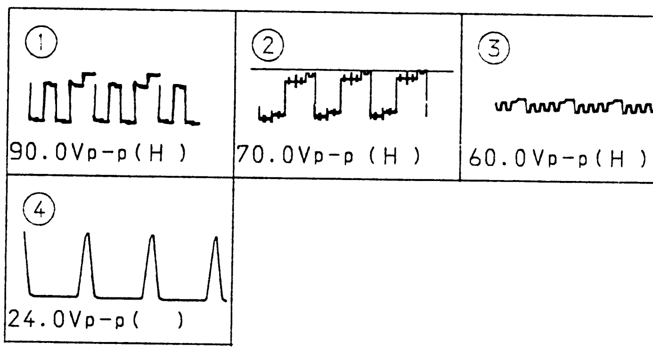

CN2 10P WHT
AFT
BG/DK
TV I0
FM2
GND
FM1
SIF
AM MONO
5V
9V
TO A BOARD IFB101
CN1 10P WHT
VIDEO
GND
H-PULSE
TU AGC
SDA
SCL
GND
IF IN
IF IN
GND
TO A BOARD IFB101
L71 68µH :EL0606
IC3 PCF8574 SYSTEM CONTROL
R71 18k :CHIP
R72 18k :CHIP

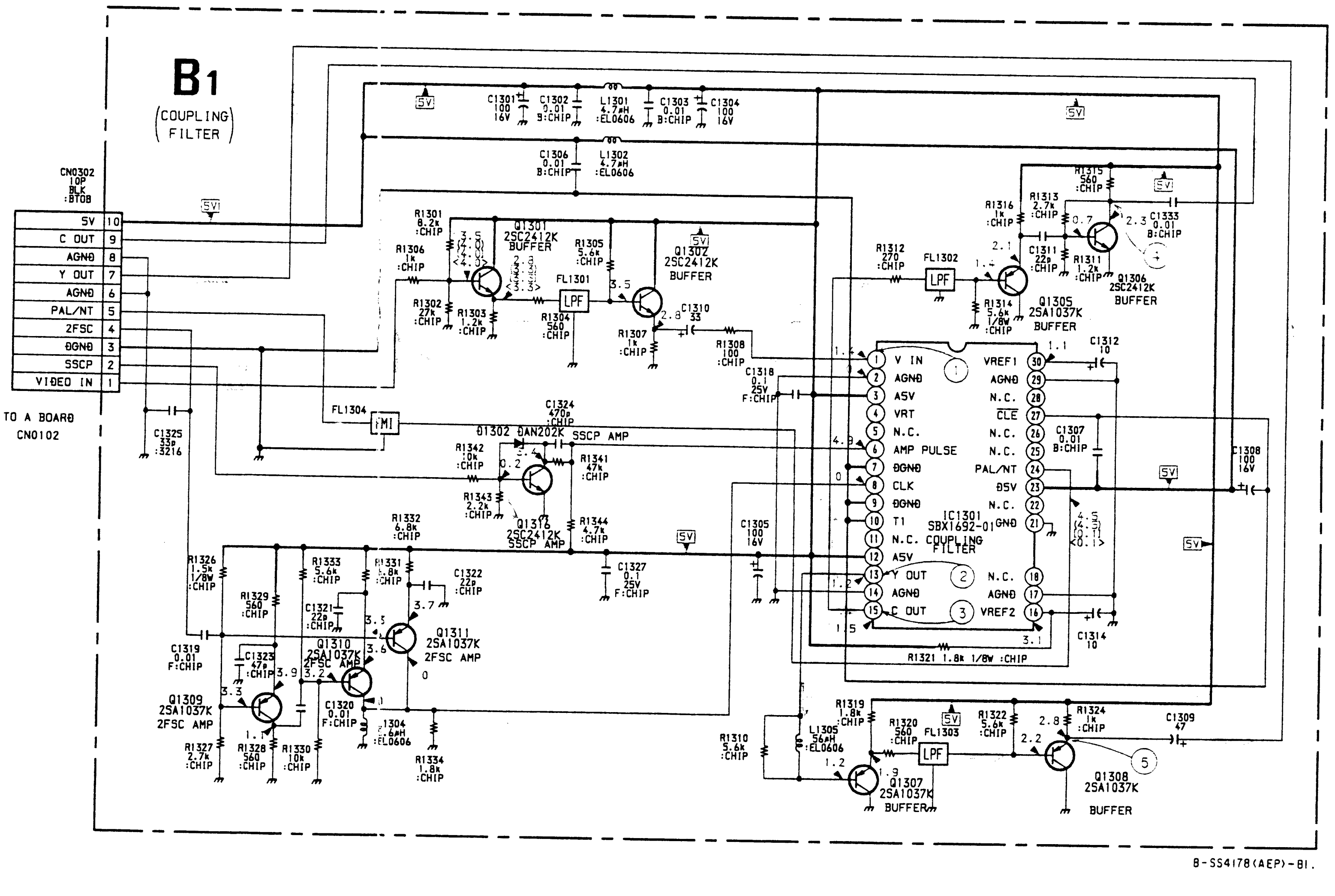

IC1 M52308SP VIF QPT
Q102 2SA1037K-T146-R AFT BUFFER
Q101 2SC2412K-T146-R SIF BUFFER
Q121 2SC2412K-T146-R VIDEO EQ
Q122 2SA1037K-T146-R VIDEO BUFFER
Q170 2SC2412K-T146-R AUDIO AMP
Q171 2SC2412K AUDIO BUFFER
Q172 2SC2412K-T146-R AUDIO AMP
Q173 2SC2412K-T146-R AUDIO BUFFER
SWF1 G3963M
CN1 10P
CN2 10P
TO A BOARD IFB101

— B1 Board —

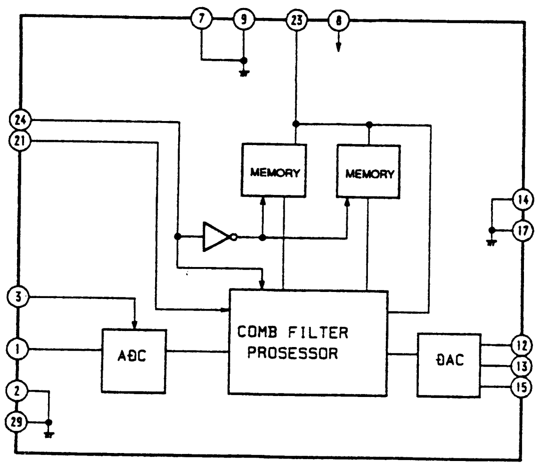


— C Board —



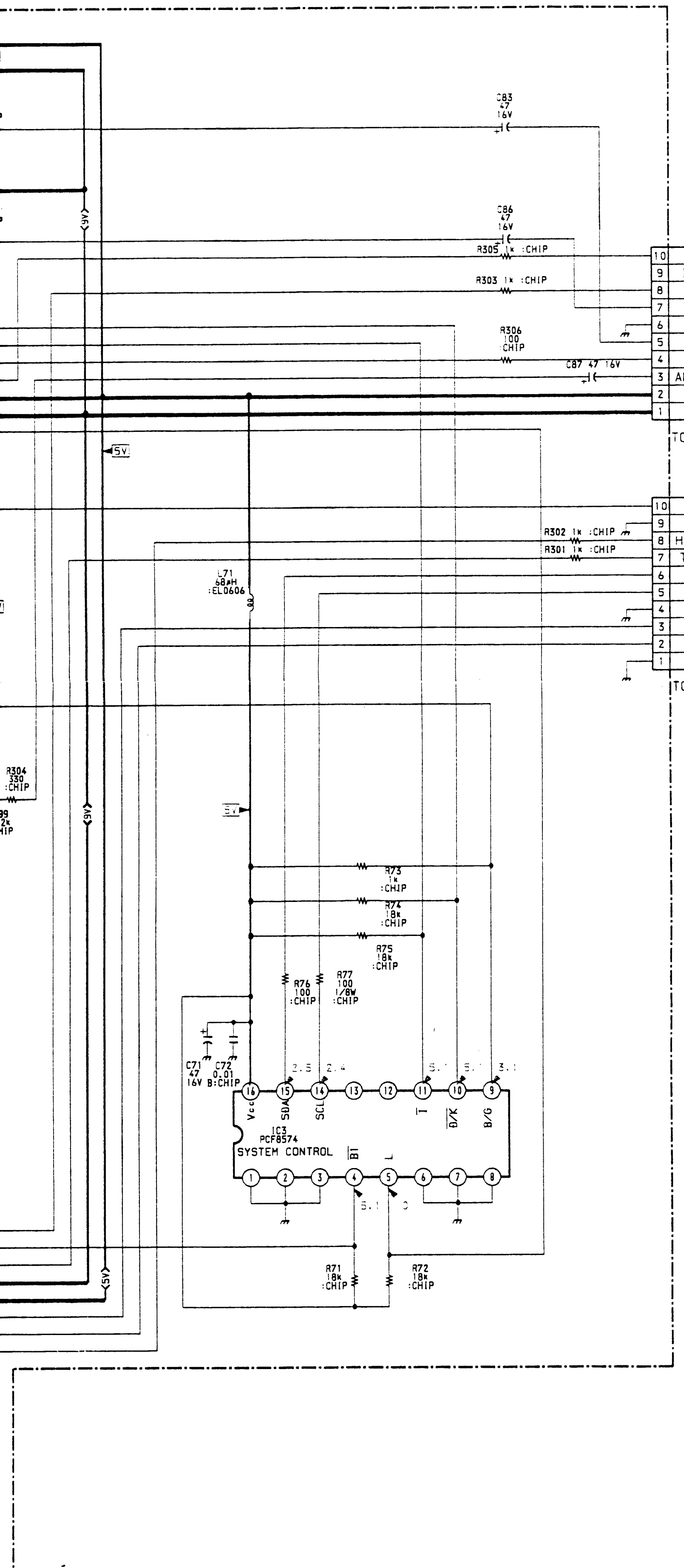

B1
(COUPLING FILTER)
CN0302 10P BLK :BTOB
5V
C OUT
AGND
Y OUT
AGND
PAL/NT
2FSC
BGND
SSCP
VIDEO IN
TO A BOARD CN0102
IC1301 SBX1692-01 COUPLING FILTER
Q1301 2SC2412K BUFFER
Q1302 2SC2412K BUFFER
Q1302 DAN202K SSCP AMP
Q1303 2SC2412K SSCP AMP
Q1305 2SA1037K BUFFER
Q1306 2SC2412K BUFFER
Q1307 2SA1037K BUFFER
Q1308 2SA1037K BUFFER
Q1309 2SA1037K 2FSC AMP
Q1310 2SA1037K 2FSC AMP
Q1311 2SA1037K 2FSC AMP

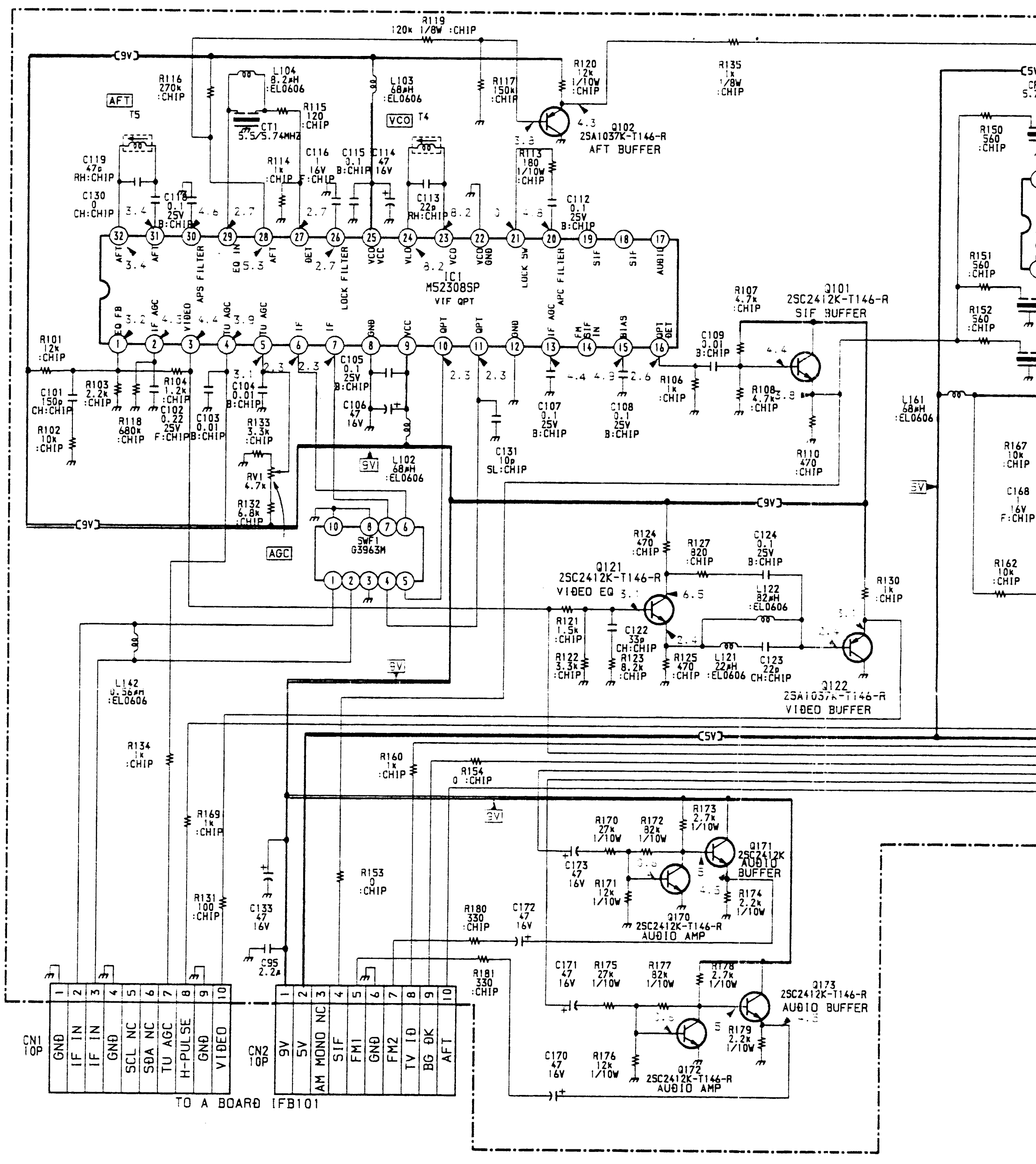
B1 BOARD IC1301 SBX1692-01


MEMORY
MEMORY
COMB FILTER PROSESSOR
ADC
DAC

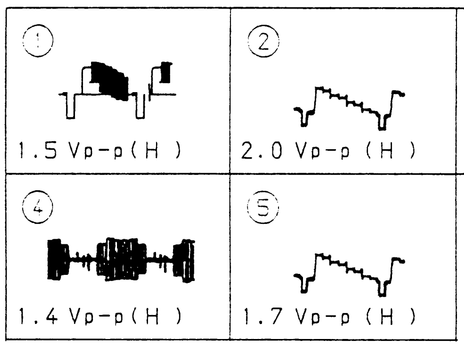
8-SS4178(AEP)-B1.

(KV-E2531D/E2931D/E3431D ONLY)

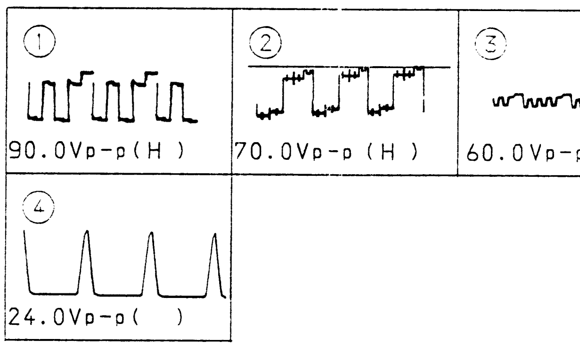

AFT
BG/DK
TV ID
FM2
GND
FM1
SIF
AM MONO
5V
9V
CN2 10P WHT
TO A BOARD IFB101
VIDEO
GND
H-PULSE
TU AGC
SDA
SCL
GND
IF IN
IF IN
GND
CN1 10P WHT
TO A BOARD IFB101
IC3 PCF8574 SYSTEM CONTROL
R73 1k :CHIP
R74 18k :CHIP
R75 18k :CHIP
R71 18k :CHIP
R72 18k :CHIP
L71 68μH :EL0606

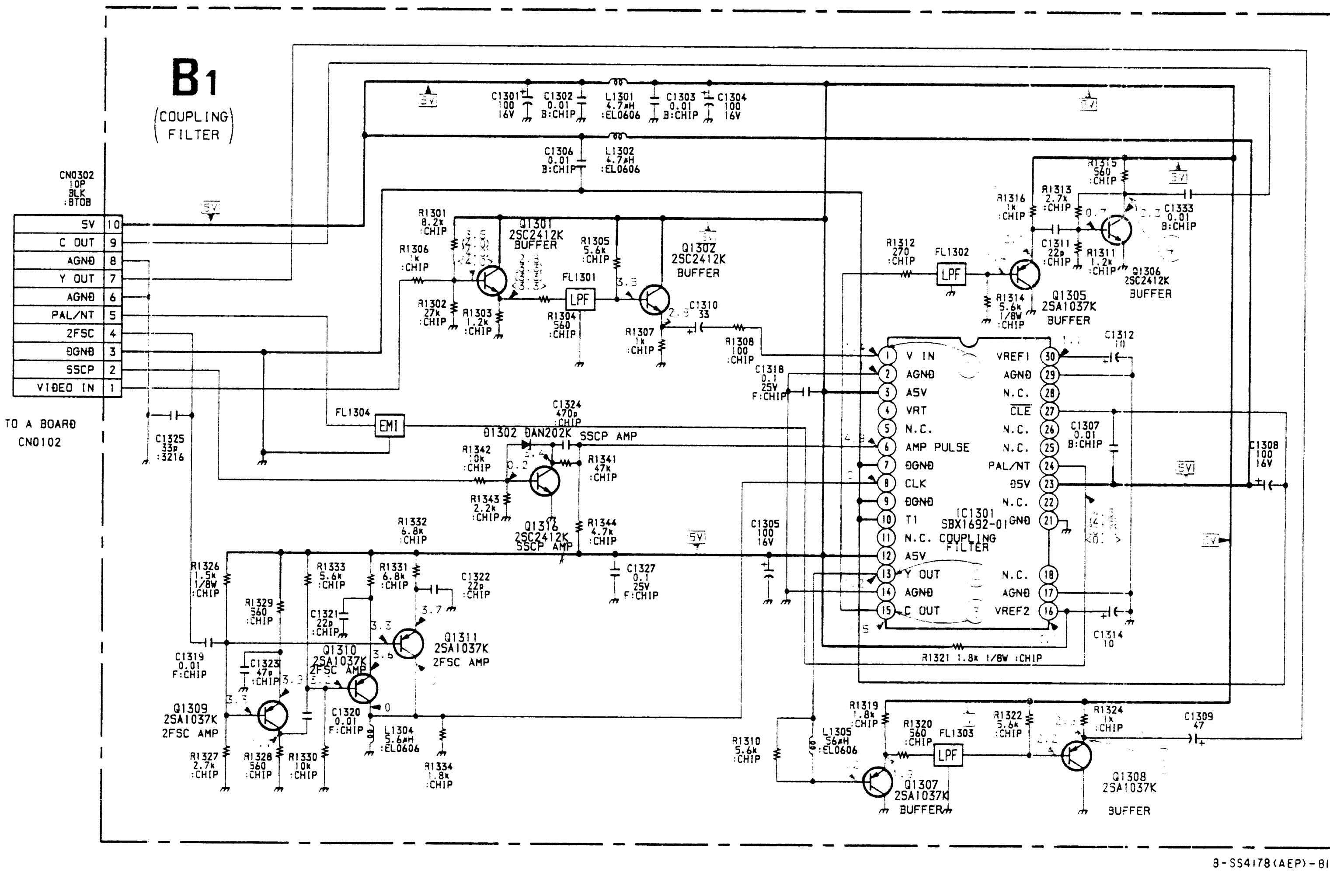

IC1 M52308SP VIF QPT
Q102 2SA1037K-T146-R AFT BUFFER
Q101 2SC2412K-T146-R SIF BUFFER
Q121 2SC2412K-T146-R VIDEO EQ
Q122 2SA1037K-T146-R VIDEO BUFFER
Q171 2SC2412K AUDIO BUFFER
Q170 2SC2412K-T146-R AUDIO AMP
Q173 2SC2412K-T146-R AUDIO BUFFER
Q172 2SC2412K-T146-R AUDIO AMP
SWF1 G3963M
AFT T5
VCO T4
AGC
CT1 5.5/5.74MHz
CN1 10P
CN2 10P
GND IF IN IF IN GND SCL NC SDA NC TU AGC H-PULSE GND VIDEO
9V 5V AM MONO NC SIF FM1 GND FM2 TV ID BG DK AFT
TO A BOARD IFB101

— B1 Board —

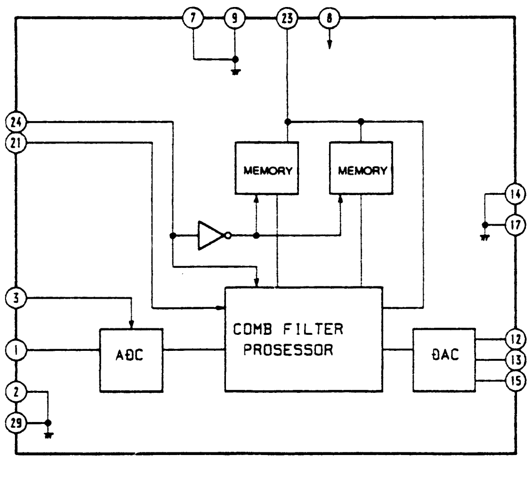


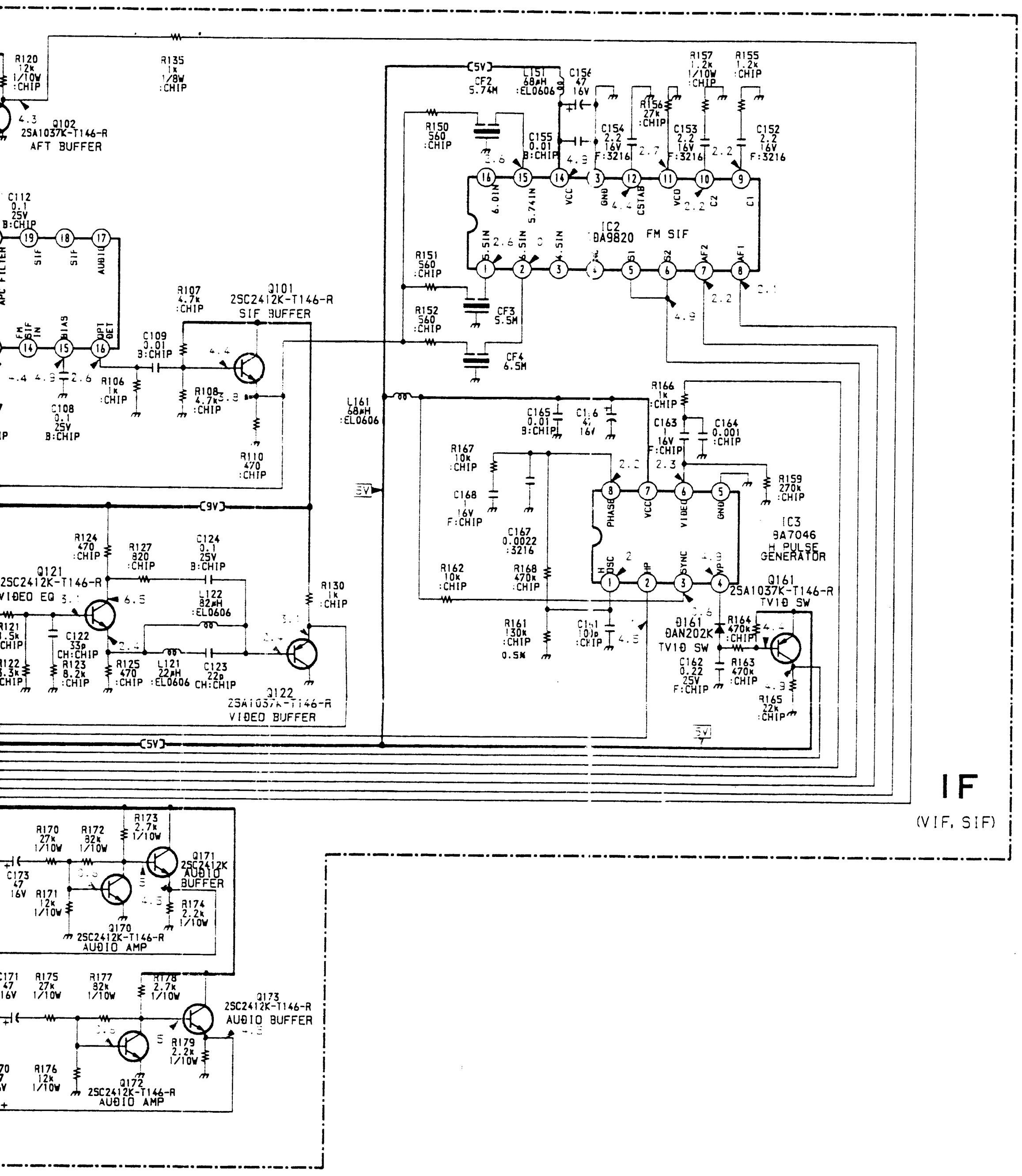
— C Board —



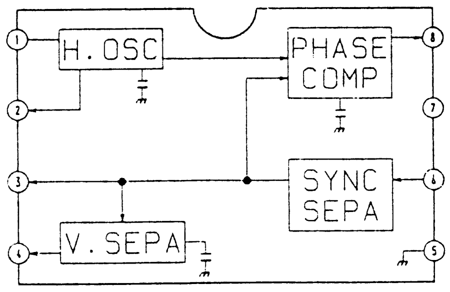

B1
(COUPLING FILTER)
CN0302 10P BLK :BTOB
5V
C OUT
AGND
Y OUT
AGND
PAL/NT
2FSC
DGND
SSCP
VIDEO IN
TO A BOARD CN0102
Q1301 2SC2412K BUFFER
Q1302 2SC2412K BUFFER
Q1305 2SA1037K BUFFER
Q1306 2SC2412K BUFFER
Q1302 DAN202K SSCP AMP
Q1316 2SC2412K SSCP AMP
Q1311 2SA1037K 2FSC AMP
Q1310 2SA1037K 2FSC AMP
Q1309 2SA1037K 2FSC AMP
Q1307 2SA1037K BUFFER
Q1308 2SA1037K BUFFER
IC1301 SBX1692-01 COUPLING FILTER
V IN
AGND
ASV
VRT
N.C.
AMP PULSE
DGND
CLK
DGND
T1
N.C.
ASV
Y OUT
AGND
C OUT
VREF1
AGND
N.C.
CLE
N.C.
N.C.
PAL/NT
05V
N.C.
N.C.
N.C.
AGND
VREF2
FL1301
FL1302
FL1303
FL1304
LPF
EMI
R1321 1.8k 1/8W :CHIP

B1 BOARD IC1301 SBX1692-01

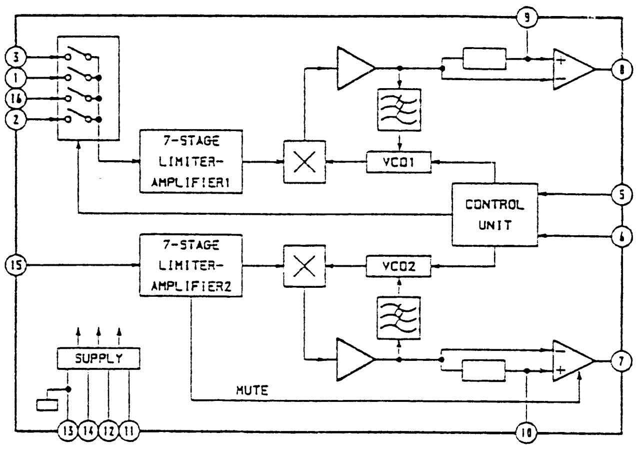

MEMORY
MEMORY
ADC
COMB FILTER PROSESSOR
DAC
7
9
23
8
24
21
14
17
3
1
2
29
12
13
15


R135
Q102
2SA1037K-T146-R
AFT BUFFER
IC2
BA9820 FM SIF
Q101
2SC2412K-T146-R
SIF BUFFER
IC3
BA7046
H PULSE
GENERATOR
Q161
2SA1037K-T146-R
TV10 SW
D161
DAN202K
TV10 SW
Q121
2SC2412K-T146-R
VIDEO EQ
Q122
2SA1037K-T146-R
VIDEO BUFFER
Q171
2SC2412K
AUDIO BUFFER
Q170
2SC2412K-T146-R
AUDIO AMP
Q173
2SC2412K-T146-R
AUDIO BUFFER
Q172
2SC2412K-T146-R
AUDIO AMP
C9V
C5V
5V
IF
(VIF, SIF)

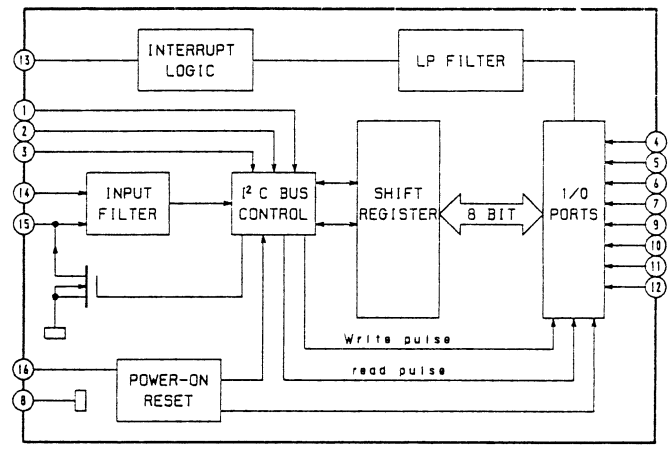
IF BOARD IC3 BA-7046 (KV-E2531D/ E2931D/ E3431D)


H. OSC
PHASE COMP
SYNC SEPA
V. SEPA

IF BOARD IC2 TDA9820


7-STAGE LIMITER-AMPLIFIER1
VCO1
CONTROL UNIT
7-STAGE LIMITER-AMPLIFIER2
VCO2
SUPPLY
MUTE

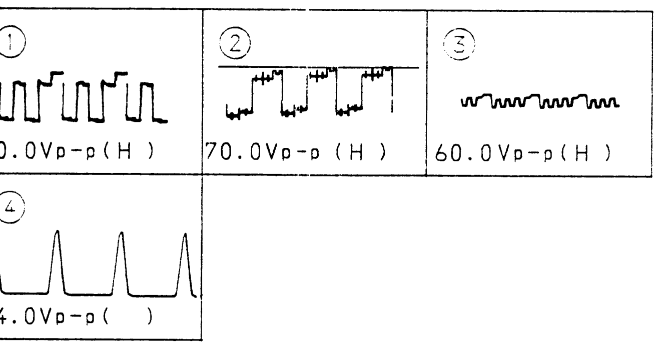
IF BOARD IC3 PCF8574 (KV-E2531B/ E2931B/ E3431B)

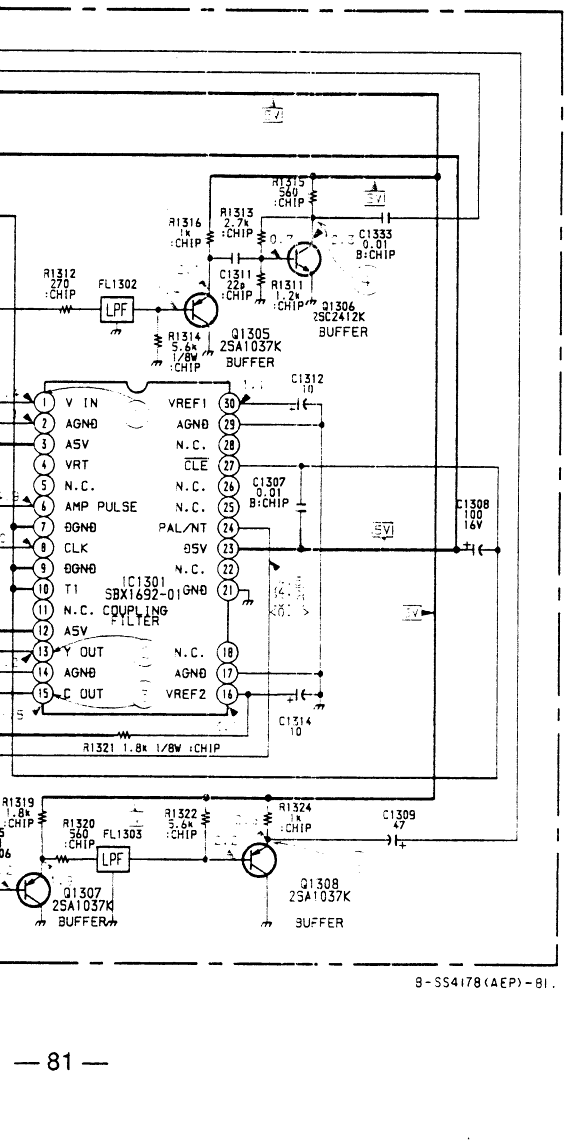

INTERRUPT LOGIC
LP FILTER
INPUT FILTER
I² C BUS CONTROL
SHIFT REGISTER
8 BIT
I/O PORTS
Write pulse
read pulse
POWER-ON RESET

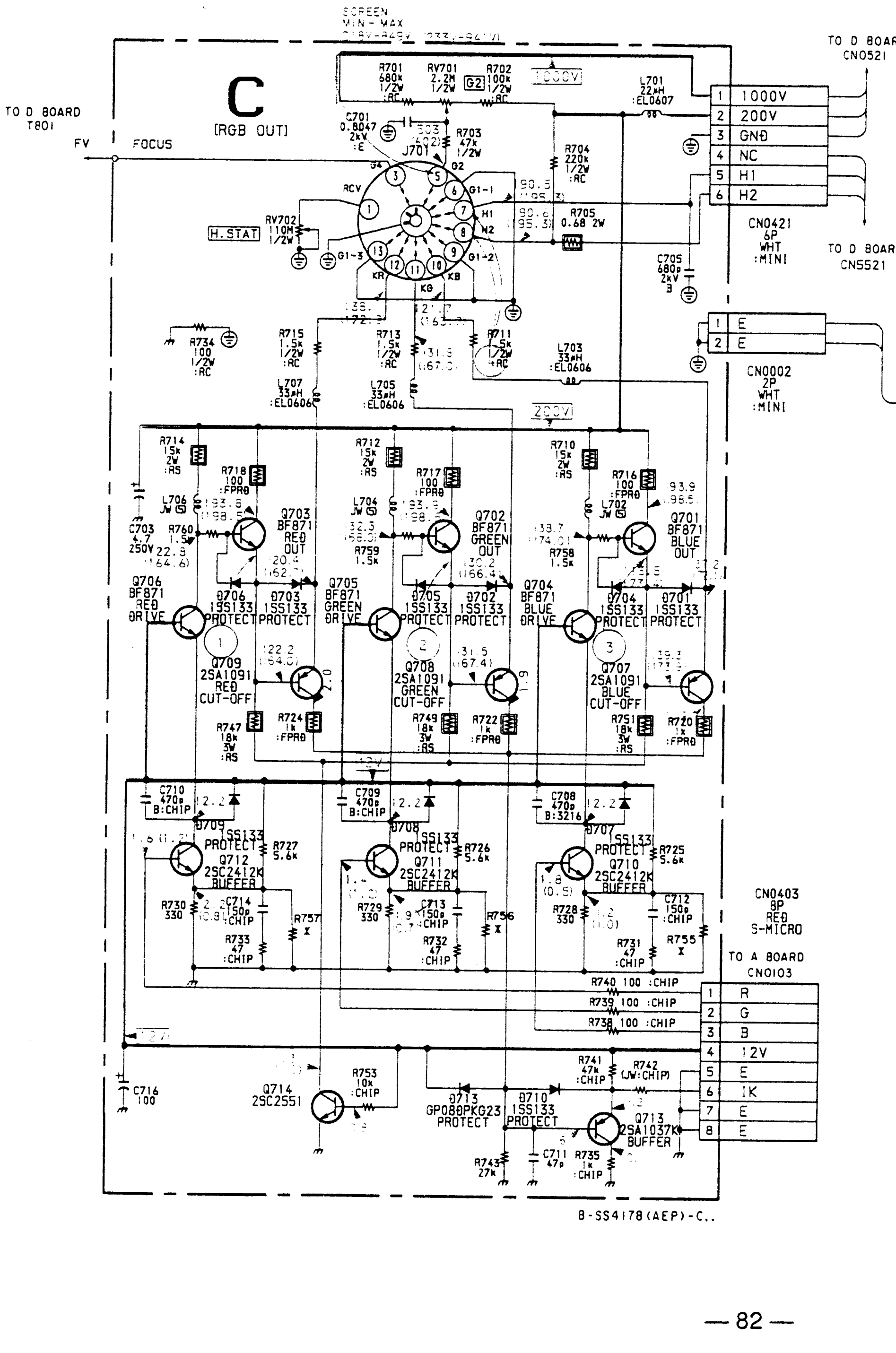
C BOARD : ⁑ MARK

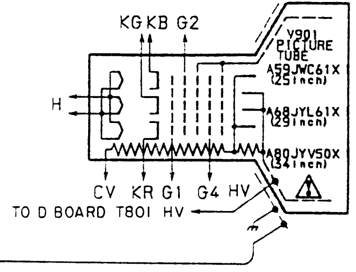
	KV-E2531D KV-E2531B		KV-E2931D KV-E2931B		KV-E3431D KV-E3431B	
R755	6.8K	1/10W	2.2K	1/10W	4.7K	1/10W
R756	6.8K	1/10W	2.2K	1/10W	4.7K	1/10W
R757	6.8K	1/10W	2.2K	1/10W	4.7K	1/10W

- C Board —



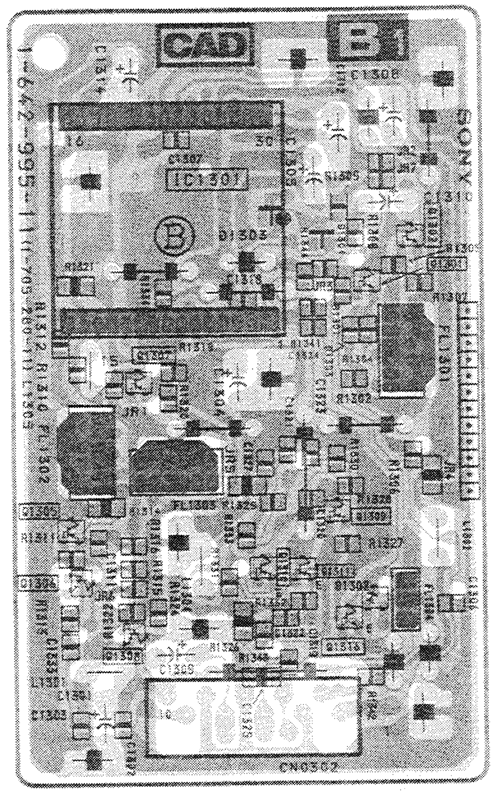

Q1306
2SC2412K
BUFFER
Q1305
2SA1037K
BUFFER
FL1302
LPF
IC1301
SBX1692-01
COUPLING FILTER
V IN
AGND
ASV
VRT
N.C.
AMP PULSE
DGND
CLK
DGND
T1
N.C.
ASV
Y OUT
C OUT
VREF1
AGND
N.C.
CLE
N.C.
N.C.
PAL/NT
DSV
N.C.
GND
N.C.
AGND
VREF2
FL1303
LPF
Q1307
2SA1037K
BUFFER
Q1308
2SA1037K
BUFFER
B-SS4178(AEP)-81


SCREEN
MIN - MAX
C
(RGB OUT)
TO D BOARD T801
FV
FOCUS
H.STAT
TO D BOARD CN0521
1000V
200V
GND
NC
H1
H2
CN0421 6P WHT :MINI
TO D BOARD CN5521
E
E
CN0002 2P WHT :MINI
Q703 BF871 RED OUT
Q702 BF871 GREEN OUT
Q701 BF871 BLUE OUT
Q706 BF871 RED DRIVE
Q705 BF871 GREEN DRIVE
Q704 BF871 BLUE DRIVE
Q709 2SA1091 RED CUT-OFF
Q708 2SA1091 GREEN CUT-OFF
Q707 2SA1091 BLUE CUT-OFF
Q712 2SC2412K BUFFER
Q711 2SC2412K BUFFER
Q710 2SC2412K BUFFER
Q714 2SC2551
D713 GP08BPKG23 PROTECT
D710 1SS133 PROTECT
Q713 2SA1037K BUFFER
CN0403 8P RED S-MICRO
TO A BOARD CN0103
R
G
B
12V
E
IK
E
E
B-SS4178(AEP)-C


KG KB G2
V901 PICTURE TUBE
A59JWC61X (25inch)
A68JYL61X (29inch)
A80JYV50X (34inch)
H
CV KR G1 G4 HV
TO D BOARD T801 HV

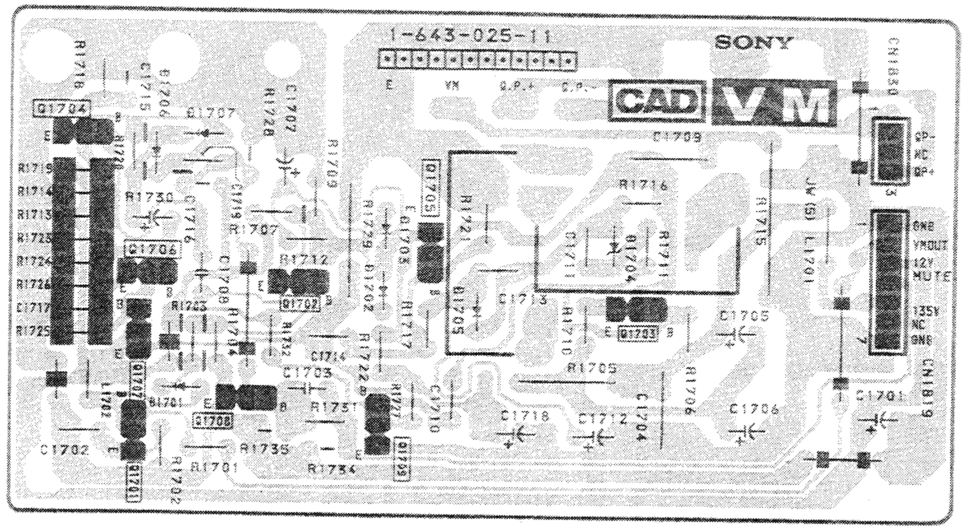
B1 [DIGITAL COMB FILTER] **VM** [VM AMP]

— B1 Board —


CAD
B1
SONY
1-642-995-11 (1-705-260-11)
CN0302

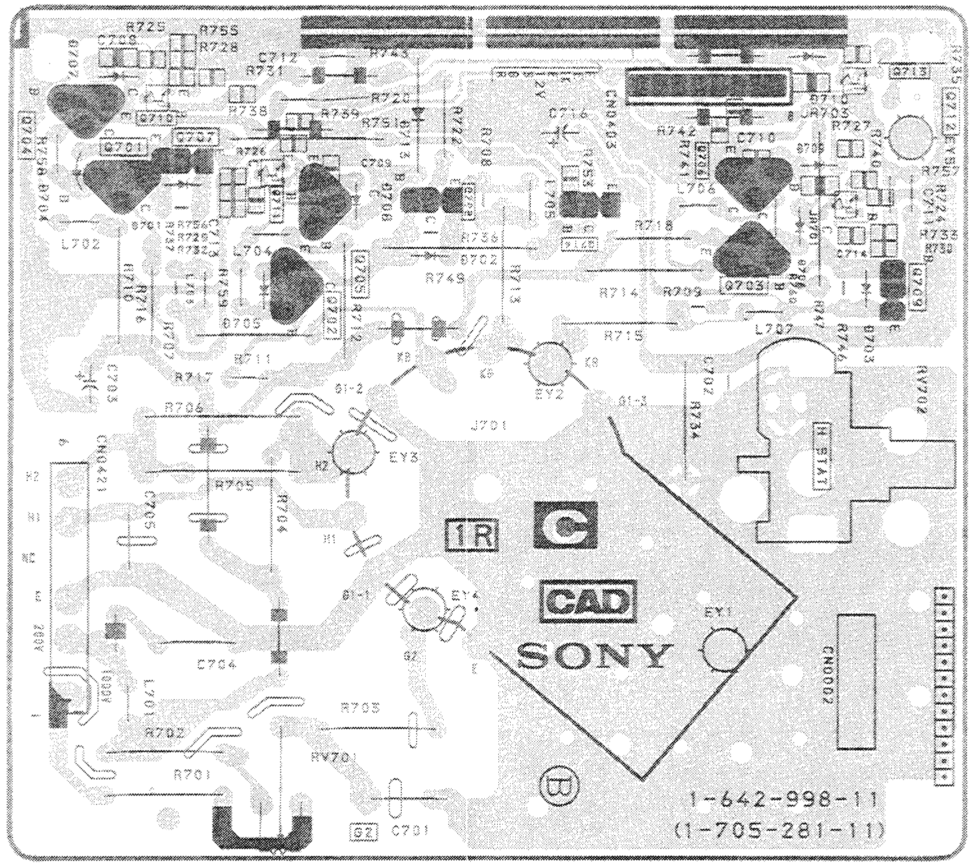
- ▨ : Pattern from the side which enables seeing.
- ▩ : Pattern of the rear side.

— VM Board — (KV-E2931D/ E3431D, E2931B/ E3431B ONLY)


1-643-025-11
SONY
CAD
VM
QP-
NC
QP+
GND
VMOUT
12V
MUTE
135V
NC
GND

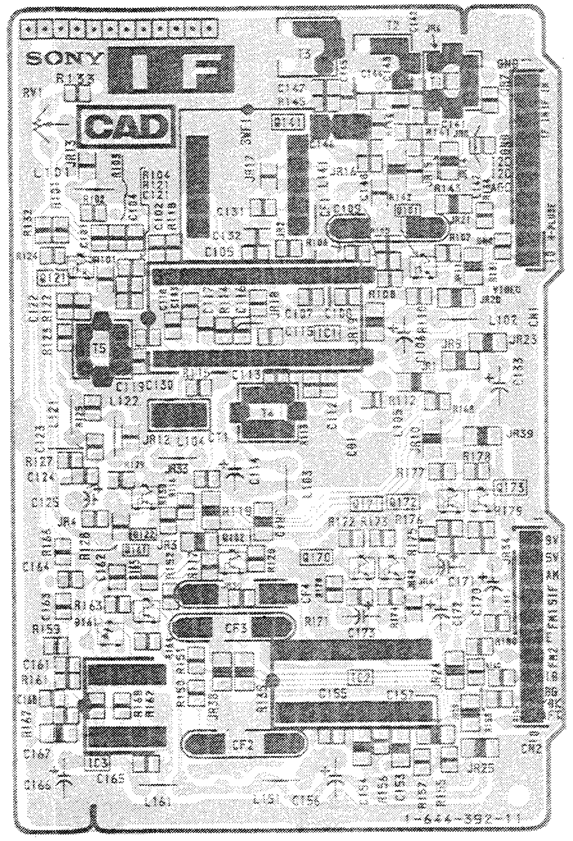
C [R.G.B OUT]

— C Board —

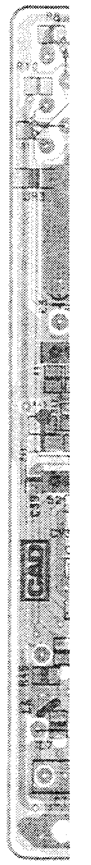

1R
C
CAD
SONY
1-642-998-11
(1-705-281-11)

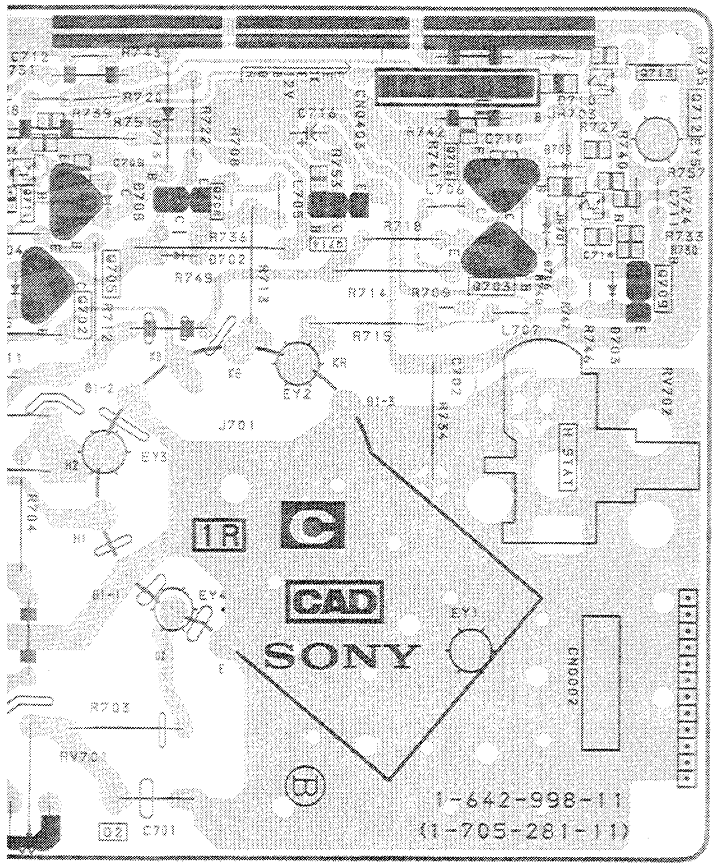
IF [VIF, SIF]

— IF Board — (KV-E2531D/ E2931D/ E3431D ONLY)


SONY
IF
CAD
1-644-392-11

— IF Bo




C
1R
CAD
SONY
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IF [VIF, SIF]

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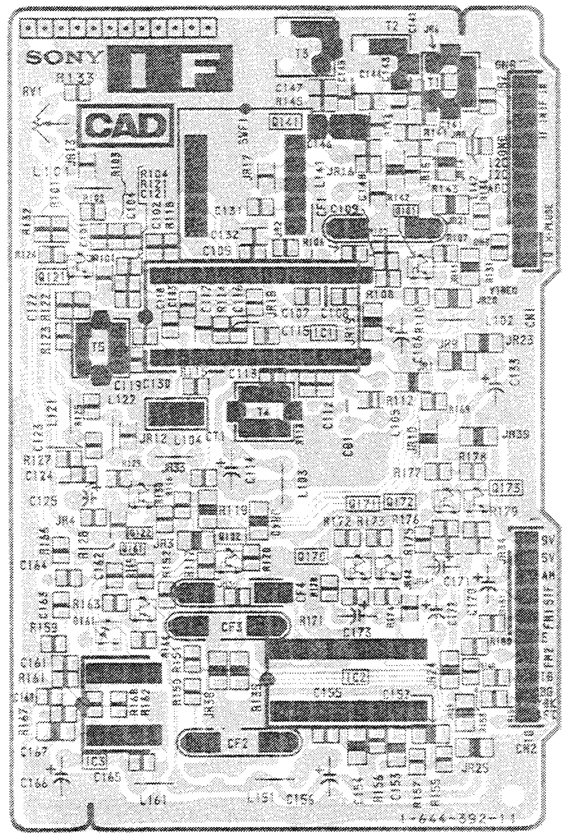
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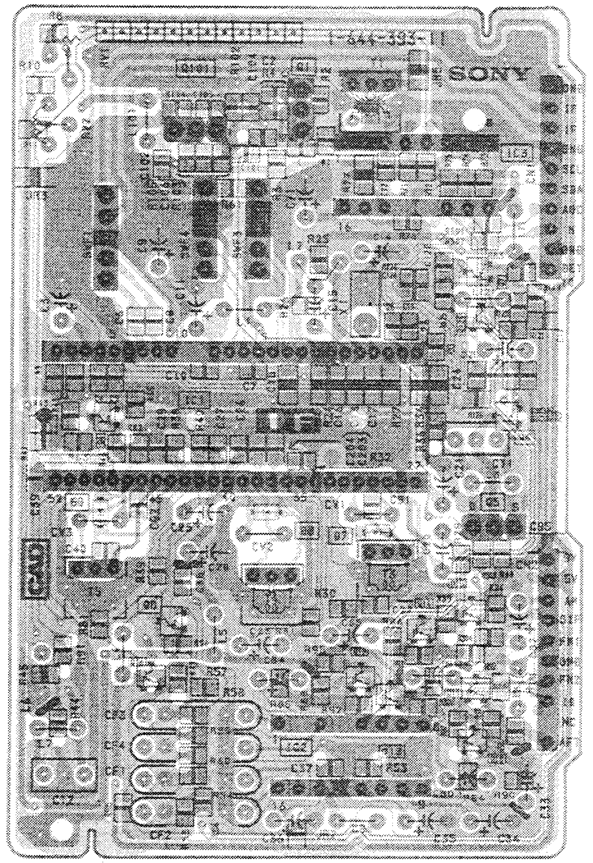
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5-5. SEMICONDUCTORS

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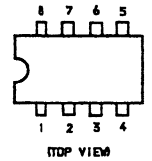
TDA4605-3
TEA2114
X24C16P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(TOP VIEW)

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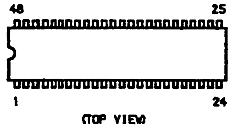
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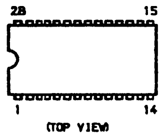
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(TOP VIEW)

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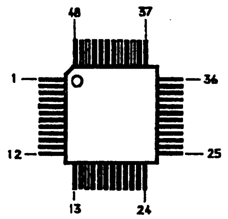
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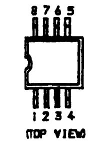
LM358D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(TOP VIEW)

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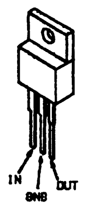

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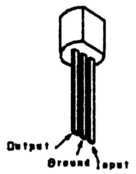
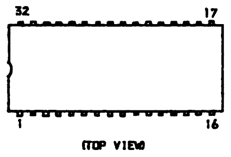

Output
Ground
Input

M52308SP
TDA9160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(TOP VIEW)

PCF8574
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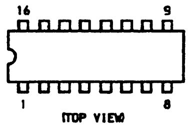
16
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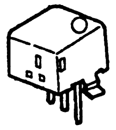
(TOP VIEW)

SBX1610-11



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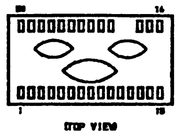
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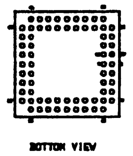
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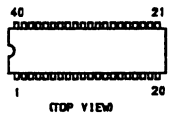
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(TOP VIEW)

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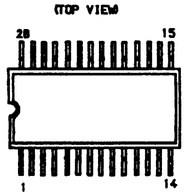
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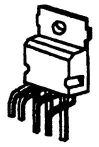

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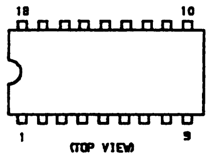
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(TOP VIEW)

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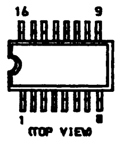
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(TOP VIEW)

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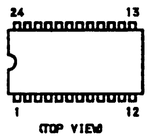
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(TOP VIEW)

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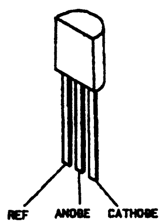
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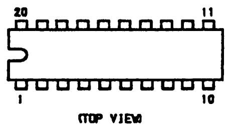
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(TOP VIEW)

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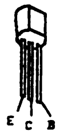

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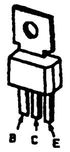

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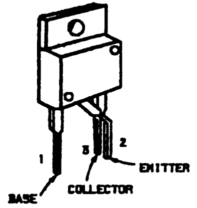
1
3
2
BASE
COLLECTOR
EMITTER

DTA124EK
DTA144EK
DTC114EK
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2SA1037K
2SA1162
2SA1162G
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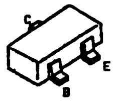
2SC2412K
2SC2413K-Q
2SC2712G



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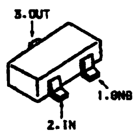
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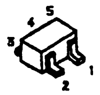
2.IN

FMW2



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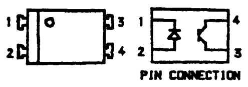
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4
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2
4
3
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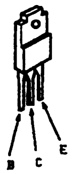

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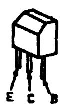

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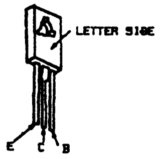
LETTER SIDE
E
C
B

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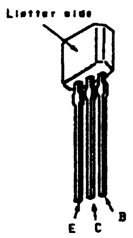
Letter side
E
C
B

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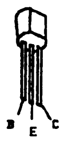

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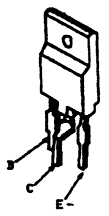

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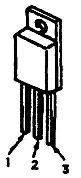

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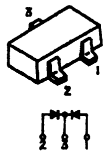

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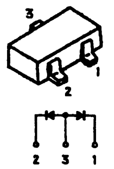

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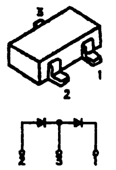

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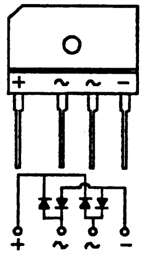

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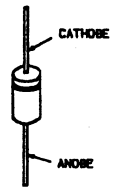
R2K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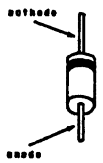
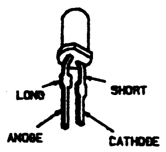
ANODE

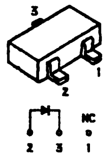
ERD29-08J


cathode
anode

LD-201VR


LONG
SHORT
ANODE
CATHODE

MA3039H-TX
MA3056M-TX
RD5.6M-B2



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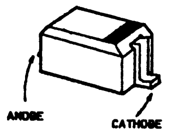
ANODE
CATHODE

MTZJ-12B
MTZJ-13C
MTZJ-30B
MTZJ-33C
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MTZJ-39C
MTZJ-5.6A
MTZJ-5.6B
MTZJ-6.2B
MTZJ-7.5A
MTZJ-9.1
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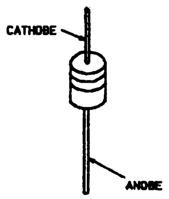
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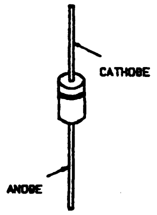
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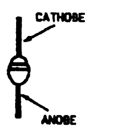
U05G


CATHODE
ANODE

NOTE:
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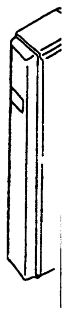
- The const
  indicated
  column.

6-1. CHA

■ : BVTP4x



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	∗A-16

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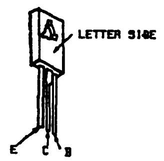

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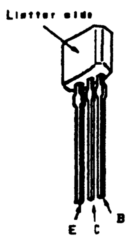

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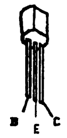

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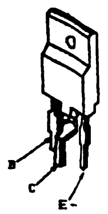

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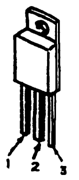

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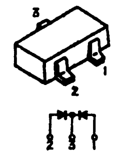

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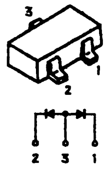

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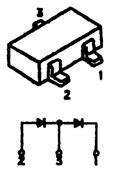

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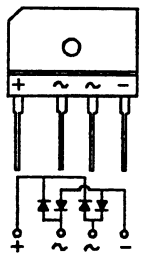
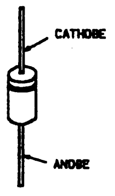
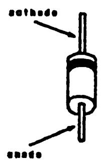


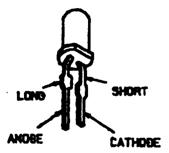
EGP20G
ERB44-06
GP08DPKG23
RGP02-20EL
RGP15GPKG23
R2K



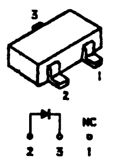
ERD29-08J



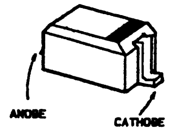
LD-201VR



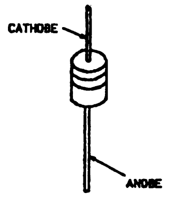
MA3039H-TX
MA3056M-TX
RD5.6M-B2



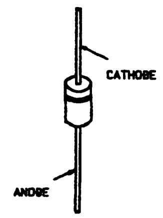
MA73-TX



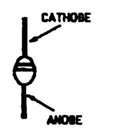
MTZJ-12B
MTZJ-13C
MTZJ-30B
MTZJ-33C
MTZJ-3.6A
MTZJ-39C
MTZJ-5.6A
MTZJ-5.6B
MTZJ-6.2B
MTZJ-7.5A
MTZJ-9.1
RD12ESB2
RD5.6ESB1
RD5.6ESB2
RD6.2ESB2
RD7.5ESB2
1SS119
1SS133T-77



RGP10GPKG23
RU30ALFS1
RU-3AM



U05G



EXPLODED VIEWS

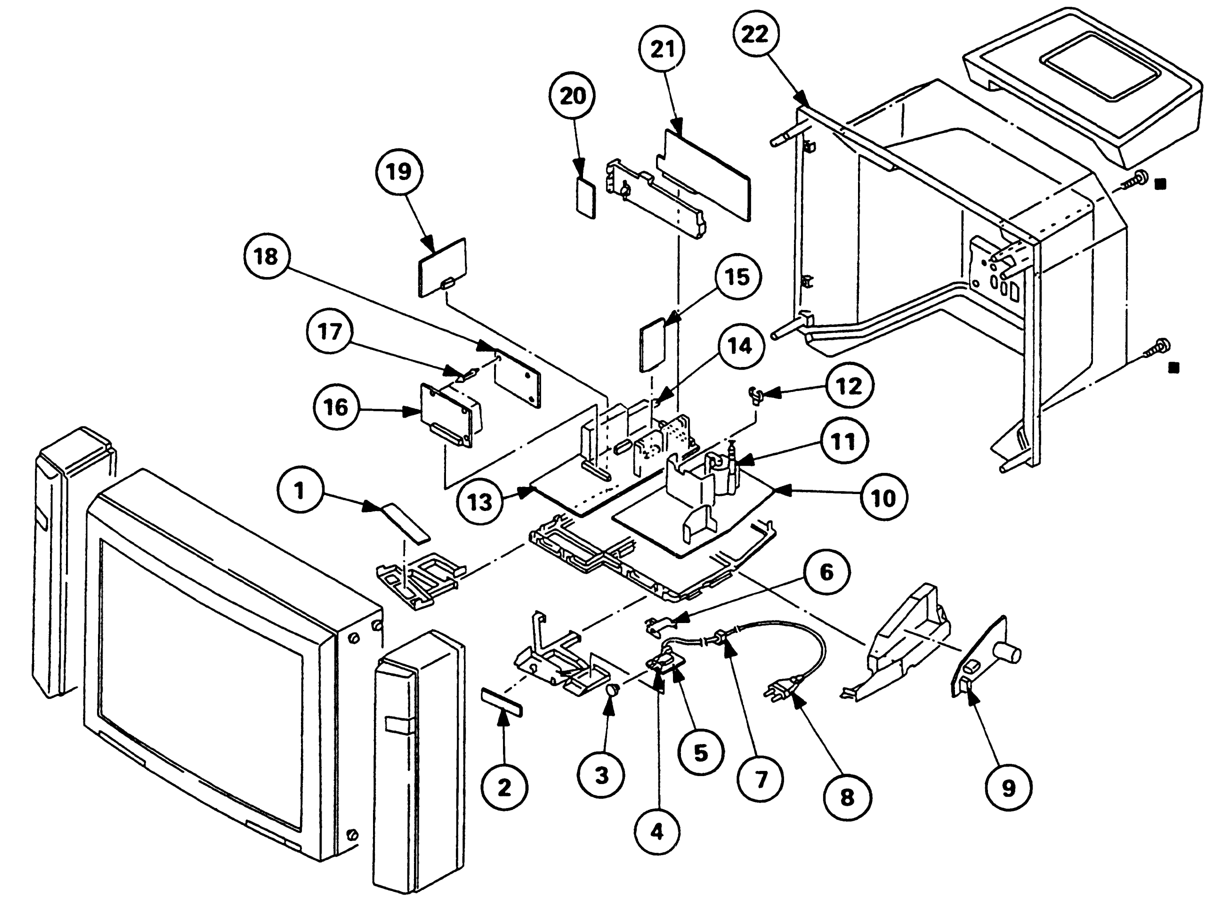
NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

6-1. CHASSIS (KV-E2531D/ E2531B/ E2931D/ E2931B)

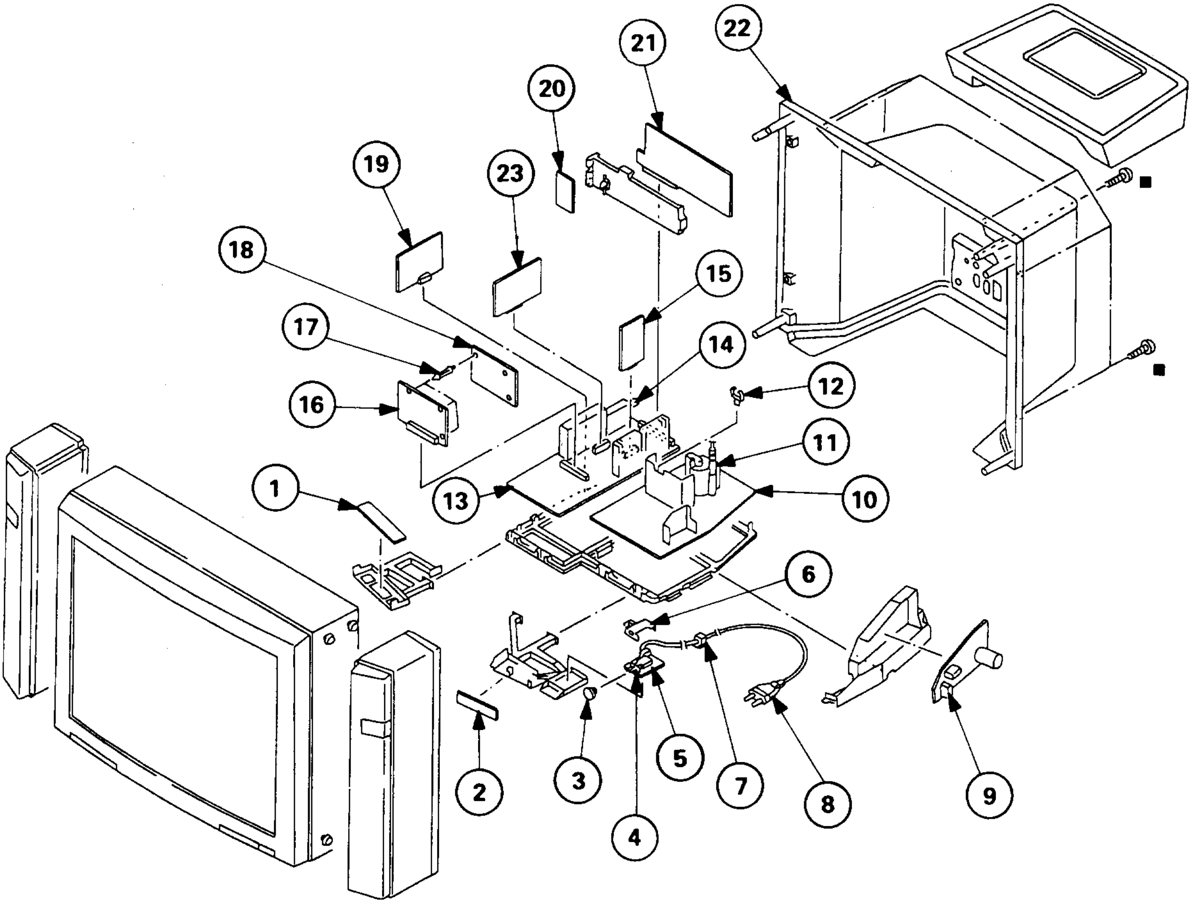
■ : BVTP4x16 7-685-663-79



REF.NO.	PART NO.	DESCRIPTION	REMARK
1	*1-643-004-11	H1 BOARD	
2	*1-642-997-11	H2 BOARD	
3	4-201-011-01	CAP, SWITCH	
4	⚠.1-571-433-12	SWITCH, PUSH (AC POWER)	
5	*A-1624-009-A	F1 BOARD, COMPLETE	
6	4-036-633-01	COVER, POWER SWITCH	
7	⚠.4-389-201-03	HOLDER, AC CORD	
8	⚠.1-590-460-11	CORD, POWER (WITH CONNECTOR) (KV-E2531B,E2931B)	
	⚠.1-590-501-11	CORD, POWER (WITH NOISE FILTER) (KV-E2531D,E2931D)	
9	*A-1624-010-A	F2 BOARD, COMPLETE	
10	*A-1642-075-A	D BOARD, COMPLETE (KV-E2531B,E2531D)	
	*A-1642-074-A	D BOARD, COMPLETE (KV-E2931B,E2931D)	
11	⚠.1-453-118-11	TRANSFORMER ASSY, FLYBACK (UX-2600A2)	
12	*3-646-071-00	HOLDER, WIRE	
13	*A-1632-101-A	A BOARD, COMPLETE (KV-E2531B,E2931B)	
	*A-1632-090-A	A BOARD, COMPLETE (KV-E2531D,E2931D)	
14	⚠.1-693-185-11	TUNER (UV916H)	
15	*A-1620-036-A	B1 BOARD, COMPLETE	
16	*A-1635-001-A	M BOARD, COMPLETE	
17	*4-385-948-01	HOLDER, PCB	
18	*A-1645-024-A	V BOARD, COMPLETE	
19	*A-1622-005-A	P BOARD, COMPLETE	
20	*1-643-003-11	K BOARD	
21	*A-1651-033-A	J BOARD, COMPLETE	
22	4-201-017-11	COVER, REAR (KV-E2531B,E2531D)	
	4-200-026-21	COVER, REAR (KV-E2931B,E2931D)	

6-1. CHASSIS (KV-E2533E/ E2532U/ E2933E/ E2932U)

■ : BVTP4x16 7-685-663-79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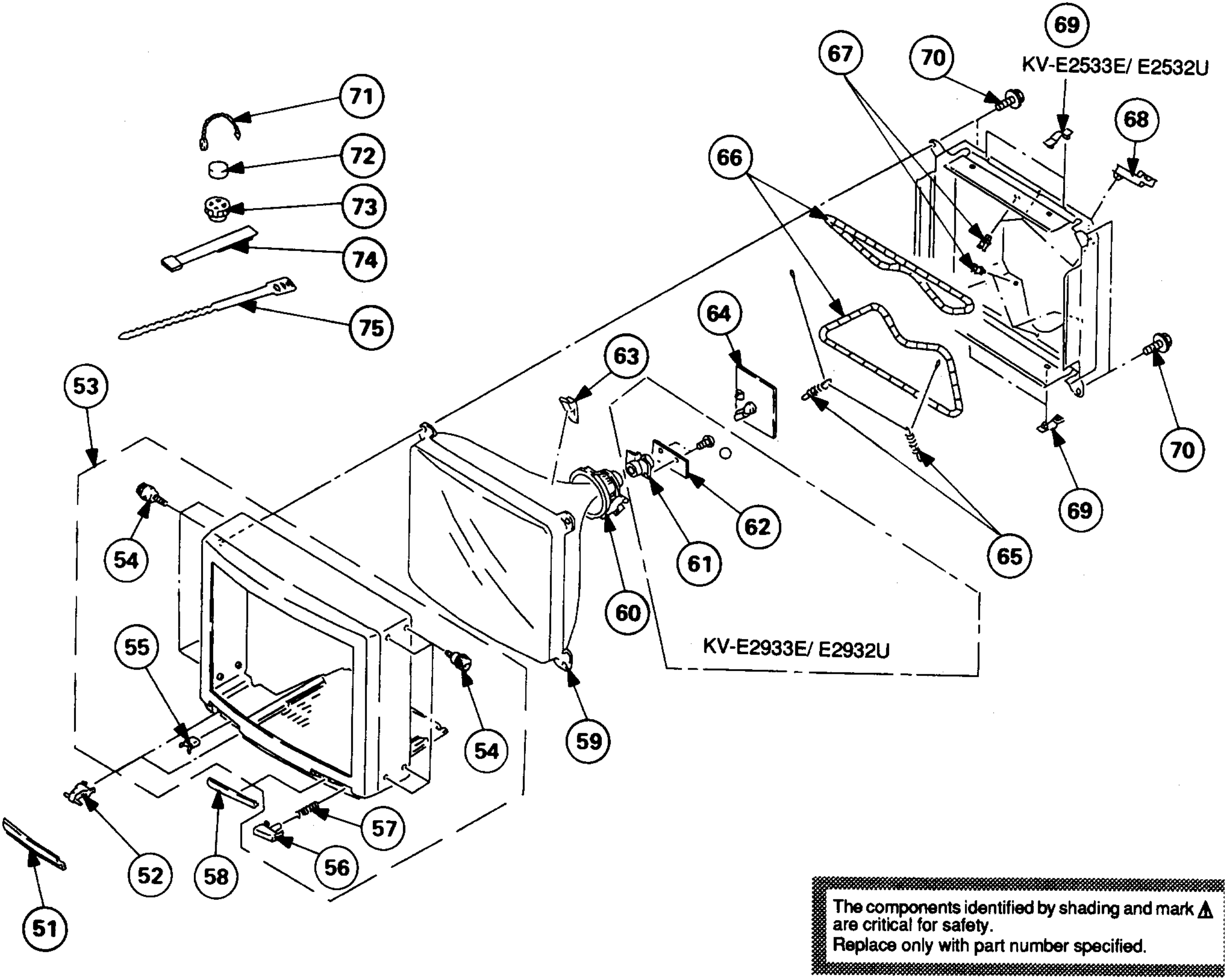
6-2. PICTURE TUBE (KV-E2533E/ E2532U/ E2933E/ E2932U)

○ : BVTP3x8 7-685-646-79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KV-E2533E/ E2532U
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KV-E2933E/ E2932U
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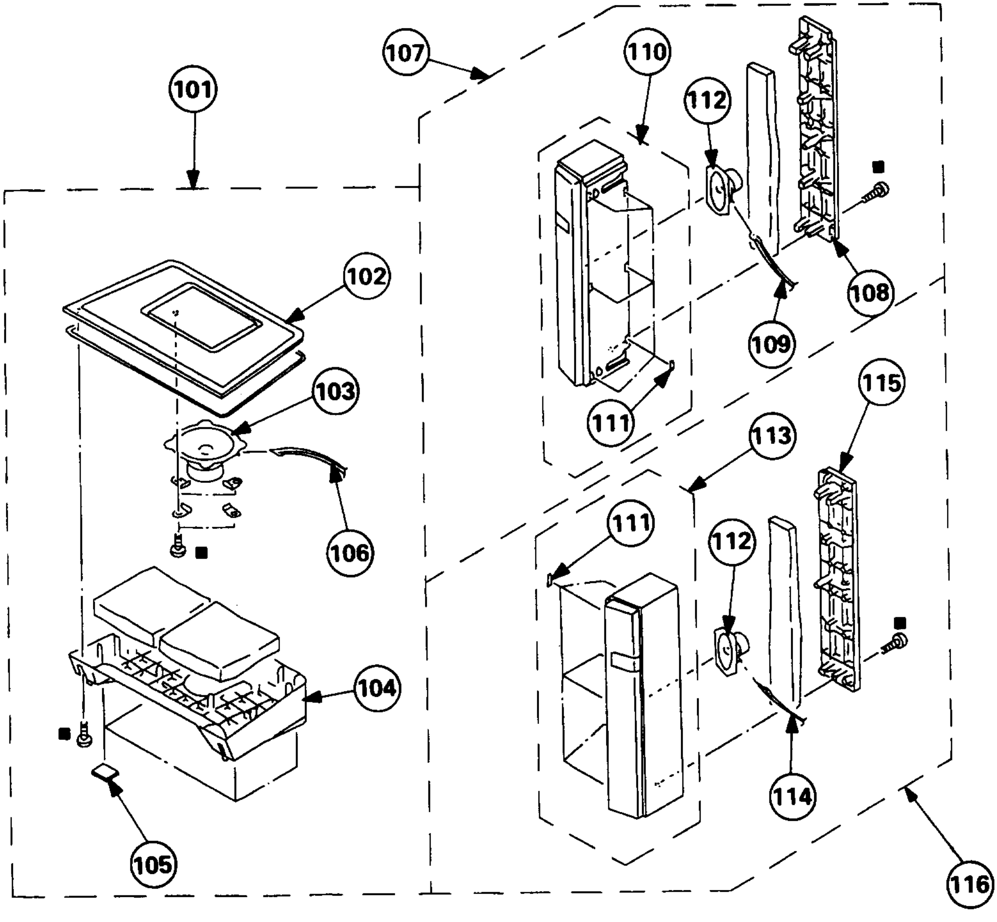
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-3. SPEAKER (KV-E2533E/ E2932U/ E2933E/ E2932U)

■ : BVTP4x16 7-685-663-79



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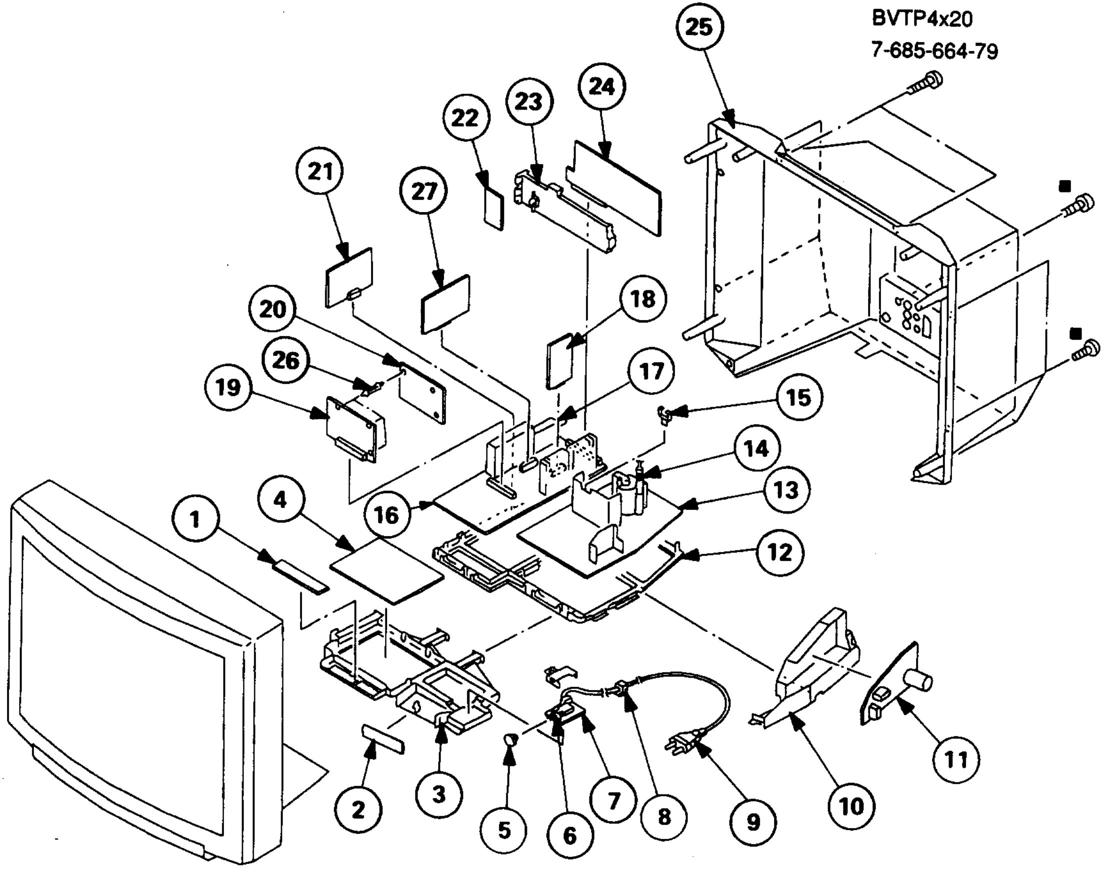
6-4. CHASSIS (KV-E3433E)

■ : BVTP4x16 7-685-663-79


BVTP4x20
7-685-664-79
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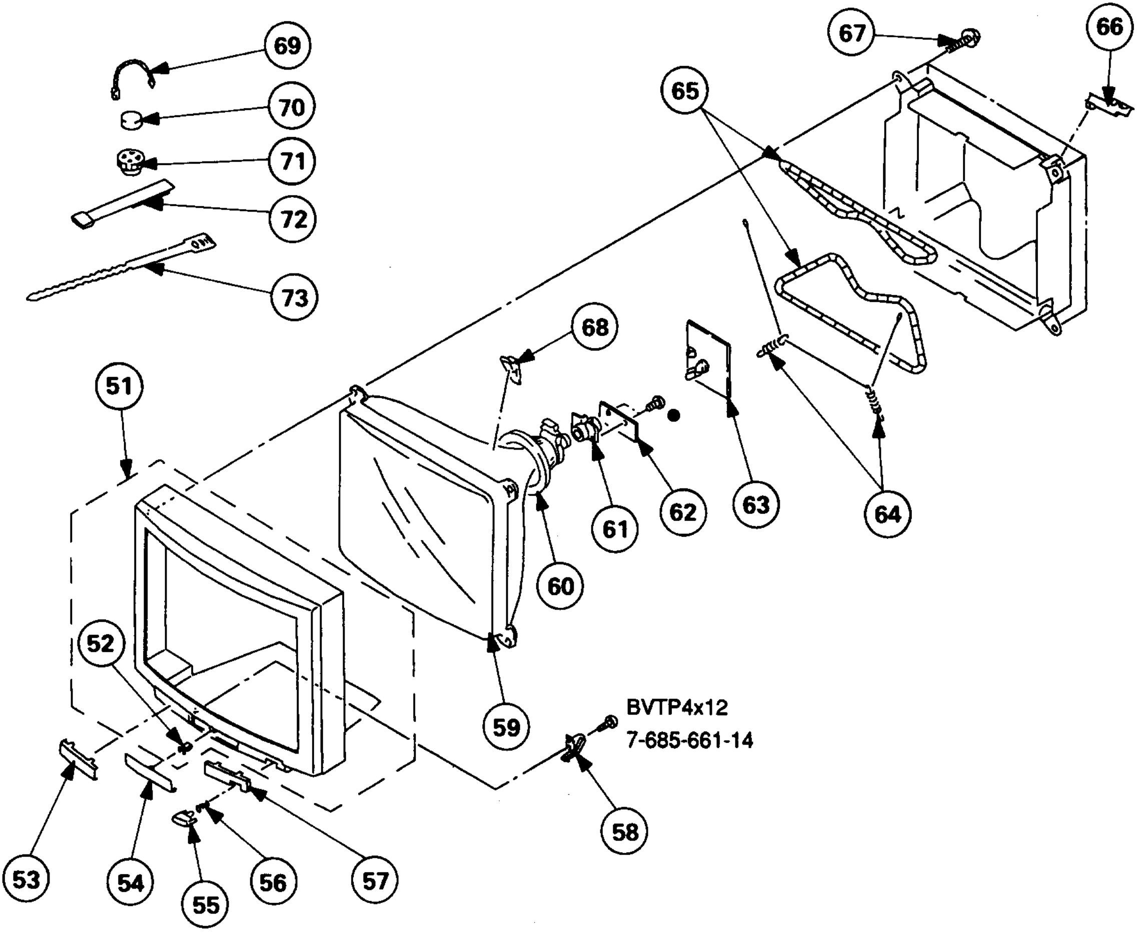
The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

6-5. PICTURE TUBE (KV-E3433E)

● : BVTP3x12 7-685-648-79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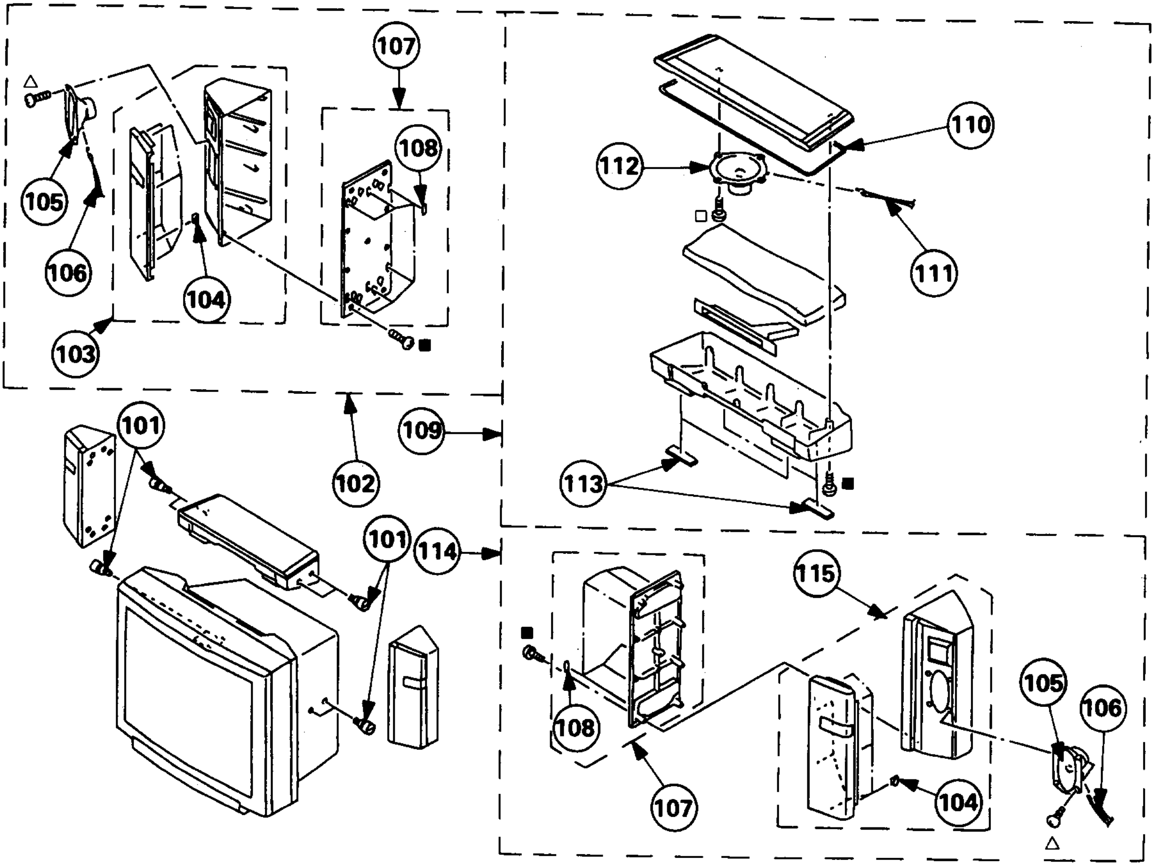
BVTP4x12
7-685-661-14

6-6. SPEAKER (KV-E3433E)

■ : BVTP4x16 7-685-663-79
□ : BVTP4x10 7-685-660-79
△ : BVTP4x8 7-685-659-79



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